THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. VIII. ALBANY, N. Y., JUNE, 1860. No. 6.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N. Y.

J. J. THOMAS, ASSOCIATE EDITOR, UNION SPRINGS, N. Y.

AGENTS IN NEW-YORK:

C. M. SAXTON, BARKER & CO., Ag. Book Publishers, 25 Park Row.

THE CULTIVATOR has been published twenty-six years. A NEW SERIES was commenced in 1853, and the seven volumes for 1853, 4, 5, 6, 7, 8 and 9, can be furnished, bound and post-paid, at $1.00 each.

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"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

Editorial Notes Abroad.

No. XXXI---VISIT NEAR NORWICH.

The Norwich Cattle Fair—the Grain Market or Corn Exchange—Plumstead and Agricultural Pupils—the Wire Worm—Live Stock—Merits of Different Breeds of Sheep and Cattle—Pleuro-pneumonia and Insurances on Cattle and Crops—Threshing, Farm Profits, Box-Feeding, Gas Lime, &c.—Hedges, a Garden Seat and conclusion.

It was the object of the last letter in this series, to convey a general idea of the County of Norfolk, and the productiveness there attained. With Mr. READ, to whom, by conversation and through the Essay already alluded to, I was indebted for many of the facts there detailed, I had the pleasure of visiting Norwich Hill on the day of the weekly Fair or cattle-market.

We are as yet deplorably deficient, as a general rule, in anything exactly corresponding to the fairs, markets and market-days of Great Britain. I shall not attempt at present to point out their advantages, as opportunities will be hereafter afforded for recurring more particularly to the subject. That they form a part, and an essential part, in the *machinery*, so to speak, of English Agriculture, no visitor can fail to observe; and, in the facilities for buying and selling, for selection on the part of the farmer who purchases, and competition of bidders for the farmer who has anything to dispose of, their establishment and regular recurrence at stated times supplies an advantage parallel in some respects to that which the British cultivator also possesses over us, in the readier and more abundant *obtainableness* of experienced agricultural labor.

Norwich is a city of the ancient times, but the old Castle that surmounts its highest summit is now occupied as a prison, and the triple battlements that protected this Norman keep, have not for many years frowned down upon any force more warlike than the humble company that occupies on Saturdays the crowded pens below—gathered from every part of the kingdom to eat of the production of Norfolk husbandry, so that in the end the hungry eaters of the metropolis may be filled. In fact it is estimated that not above one bullock in twenty that is grazed in Norfolk is bred in the county, and all sorts of cross-bred bullocks find their way thither to be sold and fattened. If I am not mistaken, we saw some of the old long-horned stock, which at one time had a brush with the Short-horns for supremacy; there were also Irish cattle not quite so long in horn or large in frame as those, but *thicker*, and described to me as better to take on flesh; there was Scotch blood, too, but the canny North Britons have learned, they said, to keep the best at home for their own feeding; and so the collection—that day scarcely so full I think as usual—was made up, and the farmer who went out to buy had need be good in judging to know what to choose and how much to pay. There were sheep and lambs in large numbers, quite generally I think of a Leicester cross, although the marks of other breeds might also be detected. And to conclude, a stable-full of horses were to be brought out at a later hour under the hammer of the auctioneer. The pigs we did not look at.

In some cases there are corporation or other *tolls* on the animals marketed, and thus an accurate register of the sales is kept. There is no such guide to consult in regard to the number disposed of at Norwich, but with the construction of railroads, the attendance there is said to have been annually increasing in magnitude "to the extinction of almost all the local fairs in the county." Norwich, it may be added, is a city much the size of Albany.

My attentive conductor also went with me to the corn-exchange, where, very appropriately, a portrait of Mr. COKE looks down upon the proceedings of many who cherish his memory and example. Here the farmers of the county, when they are ready to sell their grain in whole or in part, bring samples of what they have, and the corn-brokers and millers who occupy stands in the apartment, examine the quality of what is offered, and conclude their arrangements for purchase. Dispatches constantly received from London show how the markets there are tending, and, if the prices do not suit, the farmers's pocket will carry his samples back again as easily as it brought them. There is generally an "ordinary" or general dinner, set at the public houses frequented by the farmers, and as the same circles meet so frequently at the same places, mutual acquaintance and association of interests are promoted. Pipes and tobacco often constitute the concluding luxury, in the enjoyment of which our English brethren have nothing to learn from us—indeed I was scarcely prepared to find the "weed" still in so high and general estimation, puffed in the primitive pipe with long and curving stem.

Some notes jotted down in visiting "Plumstead," as Mr. Read's farm, several miles from Norwich, is called—will be read, I am sure, with an interest equal to the kind-

ness with which he afforded its hospitalities to an unexpected stranger. It is illustrative of the spirit and intelligence which he has brought to its management, and I hope not a matter of indelicacy previously to mention that Mr. Read is still a young man, graduated as a farmer after some years' experience in managing for others, acquired upon estates in South Wales, Oxfordshire and Buckinghamshire, and having proved his powers of observation in all three instances by the preparation of Reports upon the Farming of the Counties named, which received the Prizes of the Royal Agricultural Society. Since his occupancy of his present farm, he had, like many of the best farmers in England, taken several pupils for instruction in the practical details of Agriculture. There are always many desirous of such instruction, either the sons of farmers at some distance who wish to acquire a knowledge of the systems elsewhere in vogue, or sometimes young men from the city with a taste for rural life and pursuits; and in no way perhaps can a knowledge of farming be so well and thoroughly obtained. With three or four pupils, in the active seasons of the year, the oversight of all the transactions of the farm is explained and illustrated, practice in determining upon and performing them, is always to be had, and the exercise of judgment in relation to live stock of different kinds as well as field operations, is elicited and directed to proper standards. Lectures are given twice a week in winter, upon both theory and practice, followed by conversational discussions upon mooted points or farther explanation of difficult ones. I do not doubt at all the correctness of the opinion expressed by Mr. R., that one year of such tuition, following a year or more spent at an institution like that at Cirencester, would provide the best education which an intelligent young man could have before undertaking the management of a farm, and I can not but wish that more of our good farmers could be induced to receive pupils into their families for similar instruction. The price paid there by the pupil is in the neighborhood of $850 per annum, but little if anything being expected from his labor; while, in many cases he provides himself with a horse, it may be for hunting or other purposes, which increases the price paid by him per year to about $1,000.

The land at Plumstead was last summer occupied nearly as follows:

In Wheat,.....	125 acres.	In Clover and Sainfoin,	100 acres.
In Barley,.....	125 do.	In Beans and Peas,....	50 do.
In Oats,.....	50 do.	In Roots,.....	140 do.

The usual four-course system of rotation is employed, as might be anticipated. About 32 bushels of wheat per acre, 40 bushels of barley, and 48 of oats are regarded as average crops in this vicinity; 1½ to 2 tons of hay are usually cut. Mangolds is a crop in growing favor, and will yield 30 tons per acre, bearing unlimited manuring, while turnips if pushed too hard are found to run mostly to tops and necks. The wire-worm is the greatest foe with which he has had to contend; coming along last spring, attacking the barley, touching the wheat a little, destroying the first sowing of mangolds, and a second sowing of Swedes put in to replace them, and doing much damage to the white turnips, which made a third sowing on the same ground. Some fields of mangolds, however, had escaped, and some of the Swedes had been only badly thinned.

As to live stock, the labor of the farm is partly done by oxen, 4 yoke and 16 horses being kept. The breeding flock of sheep numbers about a hundred, and in addition some three hundred are annually fed, together with one hundred bullocks. As to breeds, in conversation with regard to their respective merits, the remark was made that formerly meat was grown perhaps more for the *gentry;* or rather, that until more recently, flesh was put on at a cost, from the length of time required to mature it, which the wealthy could better afford to pay, while in point of fact, the poorer classes consumed comparatively very little. The South-Down, with its superior mutton, well-matured, for example, still furnishes what a landed proprietor desires to graze for his own eating, or the epicure to buy from his butcher; while, on the other hand, the great objects sought by the farmers who produce meat for the multitude of purchasers are hardiness and size, *combined with early maturity.* Without these three qualities, each of equal importance it may be—the Norfolk feeder cannot buy and sell at a profit. Continuing to speak of sheep, the larger kind of Leicester, or Leicesters with a tinge of Cotswold, (or perhaps Lincolnshire,) are said to give the desired size and maturity, and at the same time lengthen the wool; the purer Leicesters, as they are sometimes regarded, such for instance as those of Mr. SANDAY, perfect as they are of their kind and for some localities, are here considered too fine to produce a cross embodying all essential points so perfectly as the others. The ewes are the Downs, the best of them from Suffolk, hardier in constitution and finer-wooled than the males with which they are put.

It has been claimed here, and the opinion has its adherents in Great Britain, that the meat produced is really deteriorated as its maturity is forced; and there is little doubt that if one is content to wait the convenience of some of the old breeds in getting themselves ready for the knife, he may be better suited with the flesh they give him. But with sheep, the cross above described, for example, makes a better leg of young mutton, say when slaughtered at a year old, than could be had at similar age from the best South Down, while the latter would in turn be preferable at three years old. With cattle it is much the same as with sheep. There are still some, although not very many, Devons in Norfolk, notwithstanding Mr. COKE's efforts to popularize them there; they make excellent beef, and when ready to kill, you have a "nice fat little wretch"—but not *enough of him;* the size and still earlier maturity of the Short-Horn, and of Short-Horn crosses, therefore render their blood preferable to any other. It is observed in Mr. READ'S Essay, of the cattle that are now offered for sale on Norwich Hill, that the quality of the Short-Horns has been wonderfully improving, or rather perhaps it was intended to say that the grade of Short-Horn blood has been becoming a higher one from year to year, as it certainly has with the beeves sold at the cattle markets of New-York; and especially he says, that the cattle now brought over from the Emerald Isle, bear very little resemblance to the long-horned breed originally produced there; "by judicious crosses with the Short-Horns," they now obtain what the English farmer calls "very *useful* cattle," that show "much of the quality of the new blood, yet retain a great deal of the flesh and frame of the old stock."

From the pleuro-pneumonia many cattle had been lost, and few lots of cattle were received from Ireland, Mr. Read informed me, that were not more or less infected with this complaint—if free from it when starting, often taking it, he said, by being crowded together in crossing

the channel in vessels where diseased animals had preceded them. There are one or more companies to insure against loss from the pleuro-pneumonia, but as they did not take risks exceeding in amount something like half the value of the animal, he had never had recourse to this source of protection. The state of excitement upon the subject in this country, at the time of writing out these notes, is such as to lead me to wish that I had pursued my inquiries upon it a little farther. It was introduced into Great Britain by cattle from the Continent, and there seemed to be little doubt there of its being as infectious as it has here been represented.

The subject of insurance against a particular disease in cattle, was brought up by the casual mention of that of another kind, which illustrates singularly, as such little items often do, how Agriculture in Great Britain has been systematized, like commerce, into a branch of industry with its own risks to run, and its calculated chances of escaping them. Much grain is every year damaged there by *hail storms;* but by the payment of 6*d.* (say 12 cents) per acre for the surface sown, companies insure one against whatever loss may result from this cause. A storm the previous year had done much injury to a field of beans at Plumstead, but this insurance having happily been effected, appraisers on examining into the facts of the case, rated the loss at £27, (say $135,) which amount was duly recovered.

Portable engines are now to be found on many of the most extensive farms, for thrashing and other farm purposes, but thrashing is very frequently done by steam there, as in some parts of the country here it is done by horse-power—viz., one or more individuals owning an engine, will go from farm to farm to thrash out the grain as desired at a certain rate per quarter, or per *coomb*, a favorite Norfolk word, signifying a half-quarter or four bushels. I met a farmer who had been interested in one of these nomadic "steamers," as they are called, and from whom I gathered that the business, originally a quite profitable one, was now suffering rather from competition, or from the too common purchase by farmers of "steamers" of their own.

The rent here was 35s. per acre, or with tithes and poor-rates added, equivalent to about 45s., say $11.25. In the agreement between landlord and tenant, it is customary for the former to provide materials for any new erections that it becomes necessary or expedient to build, while the tenant pays for from one-half to the whole of the labor, according to agreement. In repairs, the landlord will keep the *exterior* of the dwelling and other structures generally, in order, painting as often as may be covenanted, say once in 3, 5 or 7 years, while the tenant must generally bear the burden of whatever *interior* painting, papering, &c., may be required.

It is a matter of some interest to know to what sources the profit of the farm is due, for in some years of the rotation taken by themselves, there is a constant outlay with little pecuniary return. Through the four years of the course, I understood that the annual cost of labor would average per acre about 30s., say $7.50; while, with prices as they had usually rated for several years, (the low prices of the past season being perhaps regarded as exceptional) the two "white crops," or the wheat and barley years in the rotation, should bring in a gross return of fifty dollars each per acre, and the other two years of clovers and roots, an equivalent to twenty dollars each per acre—that is an average return, for each of the four years, of $30 to $35 per acre over the farm. The difference between this sum and the land charges for rent, &c., and the sums paid for labor, will constitute, when further diminished by the heavy additional expenditures that are required for fertilizers, feeding materials, wear and tear of machinery, &c., the farmer's net avails for his own time and for interest upon the capital he has invested.

The box-feeding of cattle, which has been in growing favor, as compared with other systems, Mr. Read was preparing to adopt, I think; there is thought to be less food consumed, and the resultant manure is considered richer than when the cattle are fed in open yards. By adequate attention in keeping the litter in the corners and middle, level, no odor escapes even if the deposit remains undisturbed in the box from autumn until spring. On the other hand, Mr. R. remarked that the first cost of the boxes is greatly against them, and while tenants gladly employ them if provided by proprietors, the general preference otherwise appears to be for "small yards for 10 or 12 beasts, on two sides of which are warm and wide open sheds."

The character of the soil is such that draining is not necessary except for the purpose of cutting off springs, when one or two drains will dry an area of perhaps three or four acres. Sainfoin, succeeds well here, a plant that seems to require the presence of chalk or lime to flourish to advantage. Calcareous material may be cheaply had by using lime from gas works—on the subject of which there has been considerable inquiry here during late years. Mr. R. thought it might be a useless, or even a very destructive application, if not rightly employed. His way I understood to be, to spread about three tons per acre upon the land after harvest, for the turnips to be sown in June or the mangolds sown in May of the succeeding year. The price of this gas lime was only 62 cents for a load of about a ton and a half. Salt, which costs say $5.75 per ton, is also a common manure, applied at about two cwt. per acre, with an equal amount of guano for barley or oats after a wheat crop, as on a portion of the land a double grain crop is thus often taken.

As we walked out among the fields that refreshing English summer evening, after an American summer's day, the management of the white thorn hedges was among the subjects that came up, and I remember at least one practical suggestion. It is found better to trim them with a hook, than with shears, for although the latter process is neater and quicker, it is said to produce knots, while the hook gives a clean, healthy cut. I remember too, our sitting under the trees upon some benches in the simple contrivance of which I should have thought there might have been a touch of Yankee ingenuity, and which I should despair of rendering intelligible without the aid of a diagram. The seat was provided with a low back, and was itself composed of two boards, attached by hinges at *a*, as shown in the accompanying section, so that one of them with the back (*b*) would turn over and form a roof for the rest of the seat when not in use, keeping it dry and clean in all kinds of weather. One who has gone out in the early morning to find every garden chair a miniature pond, or a favorite roost for any stray bird that has reposed in the vicinity, will appreciate so ready a mode of protection.

In the morning my friend kindly drove me into the

railway station, in season for a train to Elmham, where Mr. FULCHER—to whom I had been indebted for the suggestion of this visit at and near Norwich, as well as for the means, through Mr. Read's acquaintance, of acquiring much information as to the general agriculture of the county—was so obliging as to have a cart awaiting my arrival—and by a *cart*, I mean one of those very handy two-wheeled one horse vehicles, to which I have already alluded as universal there, and as being one of our as-yet-unattained conveniences. I was under farther obligations to Mr. FULCHER, which it will require another letter to explain, while I did not leave Plumstead, short as my visit there had been, without recollections of friendly attentions which I shall long cherish, and of much good farming of which I must again regret that I can now only present so detached and fragmentary a picture.

[For the Country Gentleman and Cultivator.]

NUTRIMENT ACCORDING TO SIZE.

EDS. CO. GENTLEMAN—There are but few, I presume, more ready than myself to lay aside theory, however plausible, when it is disproved by practice. But there are some things that do not admit of being disproved by practice, or in any other way. If a man was to tell us that he had proved by practical experiment, that a whole acre of ground of any kind would be just as thoroughly irrigated with any given quantity of water, as half the same area, or that it takes no more fuel to generate 1,500 volumes of steam than 1,000; or no more motive power to run a factory with 14 sets of machinery, than 9 sets—however much confidence we might have in his practical knowledge and general correctness, we should of course give these statements no credence, but indulge in the reflection, if not in the remark—even this man, too, falls into errors.

I have been to-day looking over some copies of the Co. GENT. which came while I was from home; and the above thoughts were suggested by reading an article from the pen of our friend JOHN JOHNSTON, in the paper issued 2d mo. 9th, in which he takes the strange position that "it takes no more to fat a steer that weighs 1,400 pounds live weight, than it does to fat one weighing 900 or 1,000 lbs.; and that the largest will always gain the most with equal feed, if they are of the same age." Also that "it takes no more feed to fat a lot of sheep averaging 140 or 150 pounds, than it does the same number averaging only 85 or 90 pounds." Or, in other words, it requires no more nutriment to sustain 1,400 pounds of animal organism of any given kind and quality, than to sustain 900 pounds of the same.

I think this must be acknowledged to be a fair statement of the position, for, if it took any more to sustain the 1,400 pounds in present condition, or in statu quo, than the 900, there could not be so much left to go to fat. And now I ask if these propositions are not just exactly equivalent to those above, and just as palpably erroneous? It seems to me the difficulty arises from drawing conclusions from partial and insufficient data. JOHN JOHNSTON tells us he arrived at this conclusion from feeding cattle meal in stalls, and finding the largest ones gaining the fastest. But he tells us he only gives them three to four quarts of meal per day, and feeds them hay in boxes in the yards, which they go to at pleasure; and further that this hay is of the very best quality.

Now is it not very plain that much the largest portion of the animal's gain is from the hay, of which he may eat as much as he pleases, and that the larger puts on more fat than the smaller animal, simply because he has the capacity to eat and digest more food. A steer that weighs 50 pounds more than another, because he is in that much better flesh, will not require so much food to keep him in that condition, as it will take to bring the other up to his condition; neither will a lot of sheep averaging 130 or 140 pounds, because they are fat, require anything like the food to keep them to that weight, or gaining a little, that it will require to bring a lot weighing 80 or 90 pounds up to 130 or 140 pounds. But if the position that 1,400 pounds of animal organism requires no more for its support than 900 pounds of the same kind, character and quality, age and all the attendant circumstances being alike, then I ask why should 2,000 or even 3,000 require any more than 1,000?

John Johnston says a steer fed 100 days, will gain more the last 35 than the first 65 days. This is no doubt correct, so far as gain in weight is concerned, if the animal is thin of flesh at the commencement. It takes considerable time of liberal feeding to bring the animal organism up to the highest development of health and strength of which it is capable; and until this is accomplished, the major part of the nutriment is consumed in strengthening the vital force, adding to the gastric juice and other fluids, and expanding and giving tone to the vascular, and dilating the cellular system. But when the animal reaches this point, then all the food he is capable of digesting, beyond what is necessary to sustain him in present condition, is added either in natural growth or accumulations of fat. And here lies the rationale of several important facts. The circumstances must be very extraordinary if a man can afford to keep his cattle or sheep poor, or allow them at any time to get poor.

On the prairies of the west, where millions of tons of grass go to waste annually, a man, if very short of food in winter, may afford to let his cattle get thin, if they do not get so thin as to lose their health, because they will recuperate in the summer without cost to him. But in the middle or eastern states, where food of all kinds is more valuable, it can scarcely ever be afforded. If a man does not feed his stock enough to keep them up to present condition, he loses not only what he feeds them, but a portion of animal flesh every day, and gets a little drib of poor manure in return. If he feeds them just enough to keep them up to present condition, he just has the manure for the feed and labor, unless there be an advance in the market for his class of animals from the time he commences feeding till he sells. But if he gives a little more feed, say as much as the animal can digest to advantage, it adds to the animal in natural growth and accumulations of fat, and he not only has the advantage of any general rise in the market, but he enhances the market value of the animal by making it of a superior quality, and in this way gets paid, not only for what he has added to the weight of the animal, but realizes an advance upon the entire weight. WM. H. LADD. *Richmond, Ohio.*

[For the Country Gentleman and Cultivator.]

COTTON SEED MEAL.

MESSRS. EDS.—As I am now writing, I will give you my opinion, for the benefit of Inquirer, of Cotton-seed meal. Early last spring, I had two cows which were nearly dry—they both giving but three quarts a day. I commenced giving them three quarts apiece of the meal, mixed with cut meadow hay and straw, and they commenced to improve rapidly in flesh, soon having a coat as glossy and smooth as a well fed horse, and in three weeks time they gave between eight and nine quarts of milk per day, of very excellent quality. Now, considering the poorer quality of hay and straw that I am enabled to work up, I consider that cotton-seed meal and straw does not cost much more (if as much) than good English hay, besides keeping the cattle in much better order, and the manure is worth a third more.

This winter I have used over three tons of the meal. It costs at this place, one dollar and a half per hundred lbs. By its use I have been enabled to keep eight head of cows and a yearling, better than five cows were ever kept on the place before. I cut up all my hay, straw and stalks.

It made some of the old farmers stare last fall, to see me stocking up so much more heavily than common, some of them stating that I had not so much hay as would keep five cows, and that I must remember that if I had to buy hay it would cost pretty dearly before spring. But I had more confidence in the information that I derive from the

COUNTRY GENTLEMAN than in these scarecrows which they set up. By feeding in this way, I have sold this winter two hundred dollars worth of milk. By not selling milk, I could have kept the same number of cows with half the amount of meal. GEO. D. FORISTALL. *Holliston, Mass.*

[For the Country Gentleman and Cultivator.]

Cattle Nibbling their Mangers.

MESSRS. EDITORS—"A Subscriber," in the Co. Gent. of March 8, inquires "the cause of cattle nibbling the manger and other boards within their reach, while tied in the stable." Doubtless he is right in his conjecture that it is caused by "a lack of something in the soil, thereby rendering the hay deficient of something that is necessary to the health of the animal." Probably the hay is deficient in the "bone-forming materials," that is, phosphoric acid and lime. This is the case in some of the older settled sections of New-England, where the pastures have been long grazed, and the fields long mown, without having been top-dressed or otherwise manured. The soils of these old pastures and fields have become so exhausted of the phosphates, that the grasses do not yield to the cows enough of them to supply the daily waste going on in the bones and other parts of the system, and at the same time supply the large demand for phosphates made by the milk secreting organs, or in furnishing the materials for building up the osseous frame-work of the embryo calf before its birth. Every 40 gallons of milk contain one pound of bone earth, besides other phosphates. The milk of a good cow in a year, contains, of earthy phosphate, as much as is present in 30 lbs. of bone-dust. The milk, and the annual calf, if sold off the farm, and the wasted urine (allowing only one-third of this to run to waste,) of a good cow, annually removes from the soil as much of earthy phosphates as is contained in 56 lbs. of bone-dust. Now it is not surprising, that the grasses of some pastures and fields, that have been grazed and mown for 80 or more years, are deficient in the necessary phosphates, the bone-forming materials of animal food. Cows and young cattle, thus poorly fed upon these innutritive grasses, whether in their green or dried state, instinctively turn to the proper remedy, and neglect no opportunity to gnaw upon any old bones they may be able to find. In the absence of these, they seek out old boots, shoes, or other leather, or "nibble their manger and other boards within their reach." Says Prof. Johnson of Yale—"The results of continued feeding on such poor pastures, are a loss of health on the part of the cows, especially manifested in a weakening or softening of the bones—the *bone disease*, that is not now uncommon in our older dairy districts."

The disease can be partially remedied by directly feeding finely ground bone meal to the animals, mixed with salt or provender of some kind. Two or three gills weekly will answer. Within the past ten years, I have procured many barrels of fine bone-dust, such as is made at the button-mold factory at Brighton, near Boston. Besides, some of our traders keep it for sale as a "medicine for bone-sick cows."

Some persons who write for the agricultural papers, say this story about a lack of phosphates in the soil, bone disease, &c., is all a chimera—an idle fancy.

Cows and young cattle grazed in newly cleared pastures and the clover fields of Western New-York, and fed in winter on roots, grain, and good English hay, are not troubled with the bone disease. Roots, grain and English hay, can only be grown where the soil is *naturally rich*, or artificially made so by the application of manure. In either case the soil contains all the necessary constituents of plants, and as a sequence, the crops contain all the necessary elements (including the phosphates) for the healthy growth and sustenance of the cattle.

But the condition of the soil and crops are quite different from the above, in those districts where the bone disease of cattle prevails. These old pastures and fields year after year only produce a light crop of poor, innutritive grass, known as the "wild oat grass, white top," &c. It is the Danthonia spicata of the botanist. It will grow in these old pastures and fields, where none of the better varieties are found. It is fast gaining foothold over large tracts of pastures and fields in nearly all the older and long settled portions of the hilly, rocky portions of New-England. And where the stock is kept summer and winter on this grass, the cattle generally have a hankering after bones. If cattle back in the interior do not find soda (salt) enough in their food, (and they seldom do,) the farmer usually feeds it to them. If he neglects this, they will let him know their wants, if there is an old meat or fish barrel comes within the reach of their tongues. A certain amount of iron is necessary for the healthy condition of the blood. Sometimes the assimilating vessels do not take up enough from the food for this healthy condition, and weakness follows. Upon application to the physician, he at once understands the "cause and the remedy." He at once administers some preparation of iron as a medicine. This restores the patient to health and strength. So in the case of bone disease. Ground bone is the remedy. But it would, if practicable, be a better way to supply the soil with the necessary phosphates, as has been extensively done upon the long grazed portions of Cheshire, Eng.

If "A Subscriber," will place within reach of his cattle horn-piths, or other large bones, and they are eager for eating them, as is the case with the cattle here on many of our old farms, he may be pretty sure that there is a deficiency of phosphates in his hay. If he is not in the habit of giving his cattle salt, it is possible that the "nibbling" may in part be due to that. Please try both, and report the result through the columns of the COUNTRY GENTLEMAN. "Do good and communicate."

Warner, N. H., March, 1860. L. BARTLETT.

[For the Country Gentleman and Cultivator.]

CHEAP DRAINING.

MESSRS. EDITORS—Having noticed an article in the August number of the Cultivator 1859, on subsoiling and ditching plows, I had some ditching to do, but had no ditching plow, and being a small farmer, and not able to get all the new and improved tools, I resolved to try it with a common plow. I commenced by plowing three furrows (all from one way,) about ten inches wide. These were pulled out with a dung hook. I then went up one side and down the other with the plow, thereby loosening about six inches of the subsoil, which was then shoveled out. The plow was then passed up and down again, and the loose dirt shoveled out as before; then plowed again, keeping one horse in the ditch until it got so deep that the whippletrees rubbed on the edge of the ditch so that the plow could not go to a sufficient depth. I then plowed with one horse putting him in the ditch, using a short whippletree that would not rub on the sides of the ditch, thus plowing and shoveling out the loose dirt until I got the ditch from three feet to three and a half deep. I then put in stones, putting a row on each side of the ditch, leaving an open passage in the middle, from three to four inches square, covering it over with larger ones. I then put in small stones until the ditch was nearly half full. I then put some straw on the stones, and plowed the dirt in again with two horses, putting them both on one side of the ditch, and as near it as possible, so that the dirt would fall in on the straw, and when the straw was covered, I put one horse in the ditch, and as the earth was all thrown out on one side of the ditch I passed the plow along in the ditch, thereby smoothing and settling the earth down when going one way, and filling in while going the other way, until the ditch was about full. I then turned a furrow on the ditch, from each side, thereby ridging it up higher than the ground around it by turning five or six furrows toward the ditch on each side.

I believe there are many farmers who think as I did, that none but experienced ditchers could dig a ditch. By doing it when the ground is neither too wet nor too dry, any common farm hands with a common farm team may ditch as easily as to do common farm work. I have no doubt but that tile is better and more durable for under-

drains than stones, but in my neighborhood stones are the plentiest and cheapest. I have known drains made with stones last twenty years. If the drain that I have made should get stopped up in twenty or thirty years, I have no doubt but that there will be stones enough to make another one. A SMALL FARMER. *Glenville, N. Y.*

CULTURE OF BROOM-CORN.

MESSRS. L. TUCKER & SON—Will you be so kind as to give me some information through your excellent paper as to the culture of broom-corn—when and how to plant, gather, &c., also how much seed is required to plant per acre. It is entirely a new crop to me, and any information you can give concerning it will be thankfully received. Is it considered a paying crop, and what is the average product per acre? J. WM. DANNER.

Highland Home, Va.

We can give some general information on the subject, but many particulars required for its successful culture can be only learned by experience. As it requires better soil and more skill than ordinary crops of common corn, it also pays better under proper management. Broom-corn will yield from 500 to 800 lbs. of the brush per acre, which if prepared in the best manner, will sell for a hundred dollars or more a ton—it has in some instances brought two hundred.

The land should be rich—it cannot well be too rich. Alluvial flats are especially adapted to its culture, as they are warm, fertile, even, and free from stone. The land should be well plowed, and if after a previous crop, with a deep running plow to turn under the stalks. The soil should be harrowed and rolled, to have a smooth surface. It may then be neatly and accurately marked out with a marker, in rows a little more than three feet apart. A drill follows these marks and deposits the seed. A greater crop may be raised by planting in drills, but unless the land is previously quite free from the seeds of weeds, it will be attended with too much hand labor, and hills will be better. The quantity of seed required is about one peck per acre, but many plant more, and thin out the surplus plants. The ground should be kept well cultivated—if previously clean, it will need no hand hoeing—especially if the proper kind of cultivators are employod to throw the earth against the stalks as soon as they are stout enough for the operation.

Two periods are selected for harvesting—the first, as soon as the brush is formed, while it is yet green, which furnishes the best material, but no seed; and the second, while the seed is in the dough state. If left any later, the brush will be too brittle for value. The stalks are bent down, by laying those of two rows across each other obliquely, so as to form a kind of table of two rows, with a passage betwern each table. Six or eight inches below the brush the stalk is cut off in harvesting, and carried in, and the drying completed on poles spread one or two inches thick. Such of our readers as are successful cultivators of this crop, may be able to furnish valuable details of the various parts of the operation, or improvements on this mode of management, in which case we should be glad to hear from them.

A CHEAP PAINT.—Make a thin paste of wheat or rye flour—strain it, add sufficient venetian red or ochre to make a thick paint—put on one or two coats. Dissolve one pound of glue in three gallons of water—mix in your paint, and put on for the last coat. It will look as well as oil paint.

FOR CHEAP OIL CLOTH, Ochre, mixed with paste, makes a good foundation; it fills up the cloth and makes it better to paint upon.

[For the Country Gentleman and Cultivator.]

VENEERED HOUSES.

EDS. CO. GENT.—I notice that many of your correspondents are very grateful to Mr. Woodward for his articles on Balloon houses. I shall in this article try to tell you how they *veneer* those same balloon frame houses in this city and county, which gives them the appearance of solid brick houses, and in many respects far superior, "cost about the same, or nearly so."

It is done as follows: house built as all balloon frames—lined with one inch boards on outside—the foundation wall must extend far enough beyond the sills for the brick to rest on, the brick all laid up in good mortar, so as to present a face of 2 by 8 inches; and when the wall is laid up five brick high, drive a 5 inch spike into each studding; let the head of spike be held close to the brick, that it may in driving, scrape itself into the brick, thereby holding it firm and tight. Spike every tier of 5 brick, until finished. Studding here are generally 15 inches apart; it will therefore take 1 spike for every five brick high, and 15 inches long; 7½ brick lay up one square foot.

Old frame buildings with weather boarding on can be veneered the same way, and if not plumb can fill space between boards and brick with mortar, to keep out rats and mice. In an old frame house you will have to make the foundation wall wider, that the brick may have a resting place.

The advantages claimed over a brick house are that they are much safer in a storm, and always dry and no dampness whatever; and over a frame house they are much warmer, and do not need painting every few years, which is quite a saving; and lastly, will last at least one generation longer; and I may add to those coming from houses in cities, that to veneer them with brick saves quite a nice percentage in insurance against fire.

If you think this manner of veneering balloon houses will be news to many of your readers, please give it to them. W. S. HAND. *Milwaukee.*

[For the Cultivator and Country Gentleman.]

Remedy for Cracked Hoofs.

MESSRS. L. TUCKER & SON—Please allow me to give my experience in reply to an inquiry by J. C., on the treatment of a cracked or split hoof in a horse. It has been my misfortune to own such a one, and to discover a most infallible cure; and from the construction of the horse's hoof, I think that any rational mind, however inexperienced, cannot fail to coincide with me. If not, let them try the experiment as I did, and then deny it if they can. I am no veterinary surgeon, nor did I ever employ one more than three or four times in my life; yet I use the horse in as many shapes as any other one person of our neighborhood. Fast and slow, heavy and light, old and young, are all inhabitants of my stable at once, and I am content with the number that have so far proven "out of fix." My theory and practice is, to study as nearly as I can the nature of that with which I am dealing, and treat it accordingly to the best of my knowledge, be it horse, fowl, soil, or what-not.

But to the subject—my cure for which is: Simply make an incision at the extreme top of the horny substance, cross-wise of the crack, and parallel with the horny hoof, some two inches each side of, (across and above) the crack. The old crack, if left to its way, will continue to grow up as fast as the hoof grows down—if not checked by a cross-cut. After this, with careful treatment till there is a new hoof formed, the horse will be as sound in that as any other foot he's got.

If J. C., or any one else, wishes to try this method, and takes care not to allow the old crack to tear its way upward after the new hoof forms, he will most assuredly effect a permanent cure, of which I would be happy to hear, as I know the troubles and trials of such cases to my entire satisfaction. FRANK RUFFNER. *Hamilton Co., O.*

WHITEWASH your young apple trees with good fresh slacked lime before the buds start. It will scale off, and take the bark-louse with it.

BARLEY AND ITS CULTURE.

The culture of barley has been practiced, as far as is known, as long as that of any other grain, and it flourishes in widely diverse situations. Though evidently a native of warm climates, it will grow in very cold ones—maturing in favorable seasons as far north as 72°, and in the Himalayas at an elevation of from ten to thirteen thousand feet above the sea. In the high valleys of the Adirondacs, as mentioned by a writer in our State Transactions, luxuriant crops of barley flourish where Indian corn was never planted, the seasons being too short and subject to frequent frosts.

Barley suits itself to varied soils as well as climates, but the best barley is grown on warm, rich and mellow loams. In England the terms barley-land and wheat-land are the usual designation of light and heavy soils adapted especially to the growth of these grains. On clay lands the produce of barley is greater, but it is of a coarse quality and does not malt as well—on loams it is plump and full of meal, and on light calcareous soils, the crop is light, the grain thin in the skin, of a rich color, and well adapted to malting. These are the characteristics of English barley, where great attention is given to this grain, and very fine qualities produced, but they are also true of the differing product of the soils of this country. A soil that will grow tolerable rye, will produce inferior barley, and a heavy soil better suited to wheat, as already remarked, will do the same. Mucky soils will occasionally produce good barley—(we have seen some very heavy crops grown the next year after the surface muck had been burned over, thus giving the land a large dressing of ashes,) but they are far from sure for this crop. It may appear favorably until near heading, and then turn yellow and produce nothing, particularly if hot, dry weather occurs. In our experience, a deep gravelly soil in the best condition for giving vigorous vegetation—which will bear drouth and produce a full growth of straw—if favored by a properly moist and warm season, will produce a large crop of barley—from forty to sixty bushels per acre.

In a rotation, barley should not follow wheat or oats, nor should a second crop come in immediately after the first, without applying a liberal dressing of decomposed manure; and we think it the best course to seed to clover, which succeeds well when sown on barley and dressed with plaster. Pasturing or mowing this for two years, we may then manure for corn or roots, and afterwards re-crop with barley.

The preparation of the soil for barley as already noticed, should be thoroughly made, as a deep, mellow tilth is most favorable to productiveness, and barley suffers much from a foul state of the soil. In those sections where barley has been grown most extensively, it is largely the practice to sow barley after a hoed crop, when the earth is left light and free from weeds. After such crops—well manured and thoroughly cultivated, of course—a good yield generally follows, larger often than if the same manure had been applied directly to the barley. These corn stubbles are generally plowed in autumn, especially when of rather retentive soil, and care is usually taken to provide proper surface drainage at this time, that no stagnant water may remain upon them during the winter. A fall-plowed clover ley answers well for this purpose, but should be well worked in the spring. We would first harrow well lengthwise the furrow, and then work with the gang-plow or wheat cultivator before sowing—or, perhaps, the coulter harrow would be the best implement for the purpose. When green-sward is to be sown, the double plow gives the best prepared seed-bed. We have known good crops grown on sward turned under as deeply as possible with a large plow, and the seed then covered with a shallow set gang-plow—to be harrowed and rolled afterwards. If seeded to grass, the seed should be sown before rolling—the passage of this implement covering the ground sufficiently.

It should be borne in mind by those who would grow this grain, that thorough tillage, a deep, well pulverised soil—is very important. Maturing quickly, it requires good culture, that the soil may give it immediate and abundant supplies of nutrition throughout its growth.

As to the time of sowing, it should be about as early, as the season will allow of adequate preparation. The crop stands about three months on the ground, and it is important that it gets a fair start before the summer drouth comes on. Too great haste, in sowing, however, may prove injurious, especially if followed by cold, sour weather, unfavorable to the germination of the seed, for some weeks, as in that case the soil becomes so hardened as to hinder the success of the crop.

The amount of seed usually given to an acre, varies from two to three and four bushels—poor, early sown and mellow soils requiring least. If drilled in, a less quantity is required; and the practice of rolling when the young plants are a few inches in height, if the ground is dry and porous, has lately been practiced to a considerable extent, and is found serviceable in giving support to the roots, and in causing the plants to tiller and increasing their vigor. We question the utility of heavy seeding, if proper care is taken in selecting good seed and properly covering the same. The best seed barley is that of a lively color, free from blackness at the germ end, and with a thin skin. It is advisable to change for that grown at a distance, and on different soil, occasionally—as without attention to these cautions, barley often deteriorates, becoming coarser and lighter, with thick skin and little flour, from year to year.

In harvesting barley it is important to cut it at the right stage, when neither too green nor too ripe. If rather green, the grain shrinks, and is of light weight; if fully ripe, it shells easily, is liable to become discolored, and the straw is of less value. When the head begins to assume a reddish cast and drops down upon the straw, the proper period of harvesting has arrived—and as after this the grain ripens rapidly, it should at once be cared for. It may be mown or cradled, or cut with a reaper; if the straw is long it should be bound; if short, with proper forks it can be pitched at once from the swath, and stored without binding. Barley should be secured as soon as thoroughly dry, which will not be long in favorable weather.

Barley straw, well cured and not over ripe, is readily eaten by all kinds of neat stock, and is thought worth about the same per ton as corn-fodder or inferior hay. By elevating the straw-carrier above the lower sieves of the separator when threshing, the bearded chaff may be thrown aside, and thus it may be fed to sheep without the injury to the wool which otherwise occurs.

The diseases and insects attacking this crop are not numerous, but when they prevail, often destroy the profit of its culture. A kind of smut called the barley brand, which sometimes prevails in cold, wet seasons, proves a serious disease. It is a fungus parasite, having its seat in the ear, and developing a sort of woody tissue between

the layers of the fungus. The outer covering of the grain remains sound, but the internal structure is blackened and destroyed. A species of smut, differing, we think, from that above described, was largely developed in some sections last season. Just before ripening the barley fields were black with smut heads, which in a few days fell to the ground, leaving the bare stalk in its place. There are also two or more species of barley fly, which pass their larva state in the straw, injuring largely the yield of grain, as they prevail to a greater or less extent. The wheat midge is sometimes found in the heads of grain, especially in situations near wheat fields, or where the midge was found the previous year.

Where the ravages of the above named enemies of the barley crop are slight or entirely unknown, (as they are, we believe, in many sections where it has been but recently introduced as a general farm crop,) the average yield and profit of barley compares favorably with that of other grains. As feed for stock, it ranks next to rye and Indian corn, and mixed with these grains and with oats, and ground, is excellent food for all kinds of stock.

[For the Country Gentleman and Cultivator.]

HOPS---PICKING AND CURING---II.

There are many varieties of the Humulus lupulus—some large, others smaller; some of red tinge, others of a greenish white color; some grow at irregular intervals, others in somewhat close clusters. The same sort is sometimes known by different names in different places. In some districts, the Mayfield grape, a white hop that sets in compact clusters, very similar to some varieties of the grape, and denominated simply the grape hop, is a favorite variety; but there are improved sorts that are considered superior to this even, it is reported. I should prefer, however, a good medium sized white hop, that grows in large clusters, both because those of this description yield well, and are more quickly and economically gathered—a very material consideration—when the time for that important operation comes round, just previous to the annual return of the "sere and yellow leaf," in the autumnal drapery of the majestic, beautiful forest trees.

Hop drying pre-supposes a drying kiln. In their best form kilns are costly. Having used and seen others use a cheap kiln, I will here briefly outline its form for the uninitiated, if such there be, who feel any interest in the subject. This can be available only to those who have a large barn or other floor on which to lay the heaps, as they are dried: Build a wall three feet high, 16 feet by 12. In the center of 12 feet square, in one end of this basement, build a solid block of masonry 6 by 6 feet, and 18 in. high. Now raise a light balloon frame, 16 by 12, and 16 feet high, on the basement wall; and put on this a roof of one-third pitch or grade. A small frame of 2 by 4 oak scantling is now laid on the central block, having an inside space of four feet by four. Oak studding are laid on this, and carried up—spreading, funnel-like—till they reach a perpendicular height of 8 or 9 feet in the clear. Here oak joist, 2 by 6, cross from the studding to studding of the frame. On top of these are laid strips of pine, or other wood that is not apt to warp much, 1½ by 3 inches the deepest way downward, with 1½ inch spaces between them, making a "spaced" drying-floor 11.8 by 12 feet. The space of four feet on one side is floored five feet above the wall, and four below the top of the inclosing frame of the kiln. This floor is necessary to stand on in examining the hops when drying, taking them off, or putting on, &c., and is accessible from the outside by a step-ladder. A ventilator in center of the roof-ridge is indispensable. On the side in the basement where the four feet space is left, an opening 15 by 18 inches is left in the frame, the bottom of which is the block. The frame being lined with inch board previously, the opening and interior is lined with brick, set in well-tempered mortar; the brick being laid the thickest way for the first three feet, and then flat against the boards to the top. Now the kiln is complete; the space around the block in the basement serving to store charcoal in, and the object of the wall being that of security against fire. Two kilns are necessary to dry hops economically, and not more than one acre—good hops—must be attempted with only one kiln. The cost of such a building is, I think, about $40 in Wisconsin; and it is useful for many other purposes than drying hops, though I have not time to specify.

Hops are usually fit to pack between the 5th and 10th of Sept. If tagged—as the brown appearance given them by threshing and bruising by the wind when damp or wet, is called—they must be picked before fully ripe. They are ripe when the yellow powder about the seed is easily shaken out; when the seed is nearly black; when the hop itself is firm and somewhat stiff, and rattles like dry leaves in handling.

They are picked over frames, divided into compartments or boxes, the measure being known at so much per bushel or box. The vines are cut as the poles are pulled; but not before, as they wilt rapidly; and the less they are wilted before drying, the better will the sample be thereafter. An hour in a yard at picking time will give the whole details better that it could be explained in a whole column of this page. The hops are put from the boxes into large sacks, in which they are conveyed to the kiln; and the less they are crushed and broken by these processes, the better the dried product will appear.

There is a difference of opinion as to how thick they should be laid on the kiln. Six inches is, according to my experience, thick or deep enough, but it should not be much less than this, or a larger portion of charcoal will be consumed by the rapid passage of heat through them after they are about half dried. The fire must be small at first, and gradually increased until about the fourth hour, when the maximum heat is required. It requires eight hours—nine if they are wet—to dry a kiln of hops, and the last hour or upwards the heat is reduced; the water of the hops having been before this driven off or evaporated. Sulphur, in powder, is used by many about the third hour, to bleach the hops or give it a bright, whitish green tinge, and from its well known effects in bleaching straw bonnets, etc., we can generally anticipate some improvement in *color* from its moderate use; but it is not probable that the *quality* of the sample is improved by the application in this or any other way. The hops are often examined as they dry, especially when the fire is strongest, because scorching spoils them at once; this is known by a brown color and the smell of burning. To prevent this is indispensable, hence the watchful care required. As to whether it is best to turn the hops, when a little more than half, say two-thirds, dry, there is a difference of opinion, some contending that if the undried ones be put under, their escaping vapor is absorbed by the dryer hops above them. But I rather incline to turning, because it appears probable, 1st, that the moist hops must dry sooner when nearer the fire or head, and 2d, because the dry hops with which they are covered can scarcely absorb much moisture while they are on the kiln, and are themselves charged with heat sufficient to produce evaporation. When the hops are so dry that the core of three-fourths of them will readily break, and that of the remaining fourth being only a little greasy, *instead* of tough, to the touch, the hops are dried enough, and must be quickly taken off, unless the fire has become small, or nearly gone out, and the heat is much reduced, or the fire removed, as for instance on a Saturday night or later.

Hops are laid in heaps as thick as convenient; in a warm room is best; and allowed to sweat nine or ten days, when they are fit to be pressed, baled, and disposed of. Hop growers here, tell me that American hop-presses very much more expedite and economize the process of bagging or bailing, than the antiquated English system of treading into a deep sack or well-hole; and it is not to be wondered at that Americans have arranged the best method of performing such work, considering the superior mechanical skill exhibited in most of our industrial avocations.

J. W. Clarke.

Proper Time to Cut Grass for Hay.

The above is a question about which good practical farmers entertain quite opposite views; though they seem to agree in this, that the *value* of hay as food for farm stock depends very much upon the time or season of its growth when mown. But notwithstanding this apparent agreement, there is still a wide difference of opinion as to the time the grass possesses the most value for winter food for cattle, horses and sheep. Consequently, practice varies according as these different views are entertained. Some farmers cut their grass as soon as the bloom appears, or even earlier, and others at all subsequent stages until the seeds are ripe and the grasses are so dry that the product may be stored almost as soon as cut. "Such differences of practice must necessarily be followed by a wide variation in its value. That such variation actually exists is evidenced by the fact, that upon the same quantity of hay, and this made from the same grasses, the stock of one farmer will thrive and that of another will dwindle."

This contrast in the thrift of the cattle on adjoining farms, is frequently occasioned by the fact, that one farmer cuts his grass early, or mostly while in blossom, the other letting his grass crop stand till the seed had generally matured; this farmer contending that the seeds were the most important and nutritive portions of the hay, besides, he says it will "spend better." Cattle fed through our long winters upon this late cut hay, generally go to pasture real "spring poor."

Of late years, the attention of farmers has been more directly called to this important subject, through the agency of many of the State and County Agricultural Societies. The Secretaries of some of these Associations have caused large numbers of circulars to be distributed among the farmers, containing a series of interrogatories relating to practical matters pertaining to the farm, &c. Prominent among these questions, is the following: "At what stage of growth do you prefer to cut grass to make into English and into swale hay, and what is your reason for your preference?"

In 1856, Mr. FLINT, Sec'y of the Mass. Board of Agriculture, issued circulars (containing the above quoted queries,) to practical farmers all over the State. "The replies from about one hundred and fifty towns are, that farmers prefer to cut the principal grasses, timothy and red top, when in full blossom; red clover when about half the heads are in blossom; and swale grass before it is ripe, and generally before blossoming, if possible, so as to prevent it from becoming hard and wiry."

"This practice is unquestionably founded on a correct principle, the object of the farmer being to secure his hay so as to make it most like grass in its perfect condition. The nutritive substances of grass are those, which are, for the most part, soluble in water, such as sugar, gluten, and other compounds. Now if this is so, it is evident that the grass should be cut at the time when it contains the largest amount of these principles. From its earliest growth the sugar and other soluble substances gradually increase till they reach their maximum per centage in the blossom, or when the seed is fully formed in the cell. From this period the saccharine matter constantly diminishes, and the woody fiber, perfectly insoluble in water and innutritious, increases till after the seeds have matured, when the plant begins to decay. Of course, if the plant is not cut in the flower, a great part of the nutriment of its stems and leaves is wasted."

The Secretary of the Maine Board of Agriculture issued circulars among the farmers of that State, propounding a series of questions upon practical matters connected with the farm. In the report of 1859, is found responses from many farmers, in reference to the proper time of cutting grass for hay. A large majority of them say that the English grasses should be cut while in blossom, and clover as soon as a portion of the heads have become of a brown color.

Says Mr. Sec'y GOODALE, in this Report, "The principal point to be inquired into in order to decide the best period for cutting, is, when does grass contain the most nutriment? And to this, no definite and precise answer can be given, which will be alike correct in all cases, for reason that in different grasses this stage is not the same, being earlier in some than others; but for a general answer, both theory and the opinions derived from the experience of the great majority of intelligent and observing farmers, concur in the reply—"when in full blossom, or while the bloom is falling." At this period, most grasses have, so far as can be judged, obtained from the soil and from the atmosphere, the greatest amount which they will have at any stage of growth, which is of value as food for animals, and these exist at this period in the most valuable form. The changes which take place subsequently are chiefly within the plant; a part of the starch, sugar, gum, albûmen, &c., soon go to assist in the formation of seed, and a part to constitute woody fibre, which is indigestible and worthless; and so much as is thus converted, is actual loss. Of hay cut at a later stage, cattle will doubtless eat less, and some infer from this, that it will "spend better;" but the true reason why they eat less is, because the system can digest and assimilate less. The actual benefit derived from hay is in proportion to the available nutriment contained in it."

As far as our observation extends, the prevalent opinion is, that more loss is sustained by late, than by too early cutting. That grass is sometimes mown too early, there is no doubt; but as a general rule, the farmer had better err on the safe side, and commence haying early, if he has a large amount to harvest, even if he suffers some loss by shrinkage of the first mown. It gives him a better chance to "make hay while the sun shines," for he has a longer period to secure his crop before it is "dead ripe," and sometimes saves hiring help, when labor is at its highest price, and scarce at that.

We have attended many auction sales of hay, and almost without exception, the early cut and well secured hay brought a higher price than that made from the same varieties of grasses, but not cut till the seeds had matured.

We think much might be gained by sowing in different fields, those varieties of grass seeds that mature at about the same time. The southern and western clovers usually ripen before red-top and timothy are sufficiently matured for mowing. Orchard grass, June grass, meadow fescue, and some other varieties of grasses, worthy of cultivation, are fit for the scythe about the time the above named clovers are, and a mixture of these would undoubtedly make a better quality of hay, than the clover alone. The fields of such grasses could be cleared of their crops before the northern clover, red-top and timothy would need cutting. These kinds, on well prepared lands, frequently yield large crops of excellent hay, if cut at the right period,

and made mostly in the cock. Some farmers object to the culture of the northern or pea-vine variety of clover, on account of the size and coarseness of its stems; other farmers entertain different views—we would refer our readers to two notices of this variety of clover, at pages 17, and 75, present volume of the Co. Gent.

In our own experience with this variety of clover, when cut in blossom, and mostly made in the cock, we find our cattle to be fond of it, and they eat the entire stalks as clean as they do that of the finer grasses. There is another variety of coarse or large growing clover, that is highly recommended by some who have grown it somewhat extensively—it is the Swedish or Alsike clover. Like the northern, it makes a large growth; its blossoms are white, and its duration in the soil is much longer than the red clovers. For seed, the first crops of these should be saved. The aftermath or second crop does not, like the smaller varieties, produce seed worth saving.

Of the different methods of curing hay, we may have something to say in a future paper. L. B.

Roads---Their Construction and Abuses.

Whatever may be the progress of the railway interest, the train cannot stop at every man's door, and the great means of intercommunication must ever remain the common turnpiked highway. In their adaptation to this use and good condition at all times, all classes are interested—none more so, however, than the agricultural—and in the matter of business and convenience, they may be compared to the veins and arteries wherein the life-blood of the nation's commercial and social prosperity circulates and vivifies, from the Lakes to the Gulf—from the Atlantic to the Pacific. Let us offer a few hints for the benefit of those who have the official care of them in our goodly State; who are to enter upon their "honors" about these days, as by statute provided.

In laying out our roads, the mathematical axiom that "a straight line is the shortest distance between two points," has been too generally regarded, for, unless it is also a *level* line, the paradoxical proverb that "the longest way around is the shortest way home," comes practically nearer the truth. No unnecessary curves should be allowed, but a good road rather winds around hills than runs over them, and may often do this without increasing its length. And the load which a given power will draw on a level, will require nearly *four* times that power to draw it up a rise of one foot in a hundred. Hence it has been established as a rule in road-making, that the length of a road may be increased twenty times the height to be avoided, with true economy in the result.

Most of our roads, however, are already established, and little can be done at leveling or curving—but much may be accomplished in the way of draining, gravelling, and rendering permanent. The great difference between a good road and a bad one, usually lies in the fact of their perfect or imperfect drainage. It is as impossible for a good road to exist where water stands stagnant, and can only pass off by evaporation, as it is to raise good crops on the same kind of soil. A first-rate underdrain to carry off all surplus water, will be the most direct means of reducing these mortar beds or bottomless ruts to smoothness and solidity, and will do it in a wonderful short space of time.

In many cases, roads are wet and bad because the surface drainage is imperfect—the rains and melting snows making a ditch of the middle of the road. In such cases a ditch should be provided at the side, and if the soil is not naturally quite porous, the road-bed should be well turnpiked, so that the water may run off readily at each side. Good sluice-ways or culverts, should be provided in all places where necessary—a matter too often neglected, to the great detriment of the roads.

As to the material for road-making, it should be remembered that gravel and hard-pan, or gravelly loam, are the best, and the surface soil—often mere muck--the worst material that can be employed. Better leave a road unworked, than to form with any soil composed largely of vegetable mould, a narrow track, which will always become muddy and rutted in long rains, and impassable with heavy loads in the spring and fall. In many places no turnpike is needed; and when care is taken to keep the track clear of stone, and proper drains open, it will remain in a better state than if thrown up in the usual manner. Large stone, say above the size of a man's fist, should never be used in filling ruts in roads, however deep they may be, and they should not be more than half this size if placed near the surface. They are very sure to work up when the ground is softened by thawing up in spring. Let them first be broken finely, and they will become so fixed and consolidated by the travel over them, as to remain permanent. No loose or projecting stones should be allowed to remain in the roadway at any season.

One of the first things to be done in spring, and in many places it has already been attended to, is to pass over the roads with the leveling scraper, which smooths the surface, clears it of stone, and fills up the ruts and smaller hollows. These scrapers are in common use, but the most we have seen might be improved by having the tongue put in differently, so as to allow the scraper to pass diagonally along the road, instead of at right angle, which would better round up the road-bed, and correct the tendency to flatten down naturally prevailing. These should be used more frequently—as often at least as the roads become rutted and uneven—and where proper turnpikes have already been formed, but little other labor will be found necessary.

A hint may be useful on the manner of applying the labor assessed in many districts. It is not often of any great amount, or enough to effect any very extensive improvement in the highway, and hence is often frittered away in "here a little and there a little," begun and not finished, of slight advantage to the roads upon which it is applied. It would be the better way to employ the work assessed, in making permanent improvements—like draining, turnpiking, or gravelling a portion of the road thoroughly each year—which would in time, make the whole one of the best character.

One more topic we must touch upon and we have done. We have spoken of making and mending; now let us descant briefly upon the abuses of roads.

Until we see some man's pig a permanent tenant of his parlor, or his cow stabled in his kitchen, we must allow people generally to have some idea of appropriateness, and of the uses for which a thing is designed. But how strange must be his sense of the fitness of things, whose whole farm or manufactory disgorges itself on the public highway—making it the receptacle of all manner of useless lumber, and all sorts of business operations. It is his lumber, wood, and barn-yard; his pasture and pig-pen; he sets his barn or shop butt against it on one side, and his house perhaps a few feet removed on the other—lining

the margin with all manner of farming tools and implements, with piles of stone and old rails to complete the scene.

As long as swine have the freedom of the road, it is difficult to keep it free from weeds, for these animals are sure to root up every decent spot of grass as soon as it is fairly established. We once saw, however, a road-ride for perhaps half a mile, as clear of rubbish and as smoothly and greenly swarded as the finest lawn or park which ever met our eyes, and though many years have since elapsed, we often recur to the scene. Would that its counterpart might frequently grace our highways.

[For the Country Gentleman and Cultivator.]

THE PLEURO-PNEUMONIA.

The State Commissioners charged with the bloody-work of exterminating the cattle malady, imported into Massachusetts about a year since, held a meeting in North Brookfield on Wednesday, the 9th instant, appointed for meeting delegations from the various County Societies to consult as to the expediency, among other things, of holding cattle fairs the coming autumn. Commissioners Walker and Lathrop were present, and delegates from about half of the County Societies, comprising, also, members of the Board of Agriculture, with several prominent gentlemen, among whom was Mr. John A. Taintor of Hartford.

Several herds were examined and several animals were killed, all showing unmistakable development of the pleuro-pneumonia. A new case was reported in Sturbridge—the disease having been carried thither by a cow purchased in the infected district. One consolatory fact attends every case of pleuro-pneumonia thus far, which inspires the Commissioners with hope, to-wit, that not a case has occurred that is not directly traceable, either to Belmont, or the "infected district" of the Brookfields, rumors to the contrary notwithstanding.

It appears from a statement made, that this fatal epizootic was first introduced into this country in 1847, by a farmer in New-Jersey, Mr. Thos. Richardson. He discovered it among his imported stock, and before other herds were exposed, knowing the malignant type of the disease, he immediately killed his whole stock, valued at $10,000, a most noble act. He lately wrote to a gentleman in North Brookfield, that the only way to get rid of the malady, is to kill every herd which has been exposed. Some of the farmers assert that the disease has been conveyed by moving the hay from a barn where the cattle were diseased.

More than 400 head of cattle have already been killed, and as many more, probably, stand upon the condemned list. The pleuro-pneumonia is the all-absorbing topic here, and no wonder, for the farms in this fine agricultural region are rapidly becoming herdless. Instead of the cattle upon the hills and the cows coming home at 5 P. M., to be milked as formerly, now may be seen the yawning graves soon to receive the bodies of the working oxen, spared until Saturday, the 12th inst., in order that the farmers may finish their work. The topic is one whose contemplation brings over the mind deep feelings of sadness.

On Wednesday evening a meeting was held in the Town Hall of North Brookfield, and the Rev. C. C. Sewell, of the Norfolk Co. Ag. Society was called to the Chair. Speeches were made by delegates from different parts of the commonwealth, in the approval of the work of the Commissioners. The entirely inadequate appropriation made by the Legislature, to be expended by the Commissioners in the extermination of the disease, has called for the raising of a guarantee fund, to enable them to proceed with their work, of not less than $60,000. The meeting adopted resolutions approving this, having no doubt that the next Legislature will make the necessary appropriation. Thus stands the record at present.

It is hoped that success will crown the laudable efforts making to exterminate one of the worst maladies that has ever befallen the cattle raisers of the "Old Commonwealth." Should it be suffered to spread over this country, as it has over Europe, no one can make any adequate estimation of the injury it would be to cattle breeders and graziers, unless it be such as have lived in Europe and witnessed its ravages there. Now is the time to study prevention and thorough eradication—a work that should be faithfully performed, though it should cost the killing of every herd in Worcester and Middlesex counties, where the disease has prevailed.

Strange and incredible as it may seem—both in view of present facts and the testimony of numerous veterinarians and others of England and Europe, Veterinarians, *so called*, have denied that the pleuro-pneumonia epizootic is contagious—this too, in view of the demonstrative fact, that not a solitary case of the disease has occurred without exposure, and hundreds have from exposure, as the history of the malady in Belmont and North Brookfield and vicinity do most incontrovertibly confirm and prove. Such stupidity would be incredible, but for the consideration that the race of quacks has not yet been quite exterminated by the genial reign of knowledge. Ignorance is a rebel; but, thanks to God, knowledge has the divine right to reign, and will in due time exercise the right to exterminate utterly all empirics and mountebanks, that have hitherto fattened upon the fruits of honest industry. Whom the gods would destroy of olden times they first made mad. Hence the folly and madness depicted may, after all, be a hopeful indication. GEORGE.

[For the Country Gentleman and Cultivator.]

DRY AND BRITTLE HOOFS IN HORSES.

A reader of the *North British Agriculturist*, inquires what is considered to be the best remedy for brittle hoofs in horses, and what is the best application for encouraging the growth of the horn generally. In reply, the following advice is given, which we copy because it may be of service to some of our readers who may have trouble about this condition of a horse's foot, or find a horse occasionally lame without being able to account for it, —excessive dryness and brittleness of the hoof being, though little suspected, one of the many causes of lameness. "Keep the hoof moist when the horse is not employed. During the summer, a damp-bottomed meadow is the most suitable. During winter the feet may be stuffed with a proportion (mixture) of clay and cow dung, to which a portion of common salt may be added. To encourage the growth of the hoof, remove the hair by scissors at the top of the pastern, and rub in a little blistering ointment. This will induce a more vigorous growth of the hoof; but it will not wholly remedy the defect if it is constitutional, or if it arises from founder."

The above directions about keeping the hoof moist, are, probably, unexceptionable; but we have some doubts about the safety and expediency of cutting off the hair from above the hoof, and of rubbing in blistering ointment. First of all, the direction is too vague or indefinite, as no mention is made either of the amount to be rubbed in at a time, nor of how often it is to be done, nor of the mode of avoiding the unpleasant effects which may follow from applying blistering ointment, (more properly blistering plaster,) in the case of both man and horse. Were we pretty confident that the stimulation of the skin with Spanish flies or blistering plaster, would really produce some change in the growth of the hoof, we would prefer to apply the blistering material in a liquid and more manageable shape, as by steeping the flies in diluted alcohol or in strong vinegar. Any one disposed to try the efficacy of such an application should seek the assistance of a doctor or a druggist. But probably there will be very few who will wish to venture upon a trial, as we know of nothing calculated to create any confidence in the efficacy for such a purpose, of blistering flies in any form, except the fact that they are employed to some extent in the composition of "Hair Restoratives," and "Cures for Baldness." A.

REFUSE TAN, OR SPENT BARK.

This article can be had at almost every village without money, or for a mere trifle in the way of compensation. In some instances the tanner would be glad to have it taken away. The question has been asked by one whose teams returned, from an adjacent village, empty, a great times in a year, "Would it be worth the time of loading and unloading to stop at the tannery and get a load of spent bark, now and then?" Our answer was a pretty confident yes, and the following were the principal reasons alleged in support of it:

1. Among the various *uses* of refuse tan, none, perhaps, is so generally known as its power to absorb the urine or other liquids of stables or yards. A considerable amount of fertilizing matter may thus be saved by using tan as bedding for hogs, for cattle and cows, and for horses, or even perhaps in sheep-yards and under sheep-sheds. In the volumes of the Co. Gent. and Cultivator, 1853, Mr. G. W. Durant gives some account of his manner of using tan-bark as an absorbent, and as litter for various kinds of stock. He says that he has been in the habit of employing about one hundred loads in this way every year. In the beginning of summer, for example, he puts a load or two in his hog-yard, and when that is used up (thoroughly saturated,) he puts in more, making his yard so tight that no liquid can escape. All along until winter he endeavors to keep his hogs dry by filling in fresh tan-bark. He lets these yards be undisturbed until spring, when he carts out the manure thus made on his corn ground. "It has all the effect of pure hog manure, which is said to be the best manure we can get for that crop, and produces pumpkins in a wonderful manner."

The way in which Mr. D. uses tan-bark in his stables is as follows:—To a span of horses he puts in a load as bedding, or enough to cover the entire floor eight or ten inches deep. This is forked over every day for ten or twelve days, and then carted out and put in piles, or heaps, fresh bark being supplied in the stable. This method is pursued until hard, frosty weather prevents its being used as bedding, when straw is substituted. The manure or compost thus made, he applies to his carrot ground or garden. The urine of the horses has the effect to turn the bark black, and seems to rot it very quick. He mentions as an illustration of this effect, that a pile made in the spring could not be distinguished from clear muck when carted out for wheat in September. Mr. D.'s mode of using the bark for stabling cattle, is nearly the same as with horses. He covers the floor about six inches deep with the bark, which, he remarks, makes a nice, clean, soft bed for them, and has the stable cleared every morning of all that gets wet, and the remainder leveled off. This method of bedding cows and cattle is employed except when frosty weather prevents. Mr. D. also fills up his cattle-yard occasionally in the fall and during the winter, with bark sufficient to keep them dry; and so also during the summer, he spreads a few loads sufficient to keep the cows that are yarded over nights, dry and clean. The compost or manure thus made is occasionally forked over, and then carted out in September for wheat.

Probably the chief reason why spent bark is so little valued is on account of the slowness of its decomposition. The foregoing mode of employing it indicates one way in which this objection may be obviated, or by which the decomposition of bark may be accelerated.

2. But even in its undecomposed state bark may be employed with advantage to some soils—chiefly to tenacious, cold clays. Applied to these it acts mechanically, and must serve to make them somewhat more friable. For such soils tan might even be of more advantage than manure, in many cases acting mechanically to loosen and lighten up the soil while it remains undecomposed, and at the same time giving out some fertilizing elements during its slow decomposition. In order to secure the fertilizing qualities of the spent bark more speedily, some tanners, we have been informed, burn it and apply the ashes to the land. The method employed by Mr. Durant is, however, far more economical, as a rich compost is thereby secured.

As some have a fear that tan in its undecomposed state would be likely to prove injurious to land, perhaps the best way of using it, even for clay soils, would be to have it, at least, partially decomposed, either by urine or the liquids of a yard, or by mixture with lime or ashes. Either partially or wholly decomposed it will make heavy soils lighter, and tenacious soils more friable.

3. Spent tan is certainly *useful* as a *mulch* in almost all cases in which mulching is expedient.

4. Spent tan is useful as a direct *fertilizer*. It contains several earthy and saline ingredients useful and necessary in the growth of plants.

5. It is stated in the *Farmers' and Planters' Encyclopedia*, that refuse tan is useful occasionally as a top-dressing on some grass lands, in a half putrified or even fresh state.

[For the Cultivator and Country Gentleman.]

SUGAR MAKING.

Eds. Co. Gent.—The sugar crop in Vermont is becoming an item of considerable importance; in fact it is one of the farmer's staple products. The sugar maple abounds here in almost unlimited numbers, and ever stands ready to yield up its sweet stores to add to the farmer's profits. There is no sweet that has such a delicious taste as that made from the maple, when it is made so pure and nice as to be almost without color. There are but few sugar makers, that make *real genuine* sugar. This may be owing partly to carelessness in saving the sap, by allowing leaves and other impurities to go into the pan; but we believe the main fault is in boiling. It has been found by experience and by experiments carefully conducted, by committees appointed by the "Farmer's Club" in this place, that the sooner the sap is converted into sugar after it runs from the tree, the purer and better the quality of sugar. The sheet-iron pan is at present almost universally used. This is a very great improvement on the old fashioned way of boiling in cast-iron kettles; it not only boils faster, but makes a better quality of sugar than could be made in the old way.

When the sugar pan was substituted for the old kettles, people were satisfied and never thought of having anything better; but in sugar-making, as well as all other things, there has been improvements.

The recent invention of "Cook's Sugar Evaporator," is as much of an improvement over the common pan as the pan is over the old cauldron kettles hung up in the woods by a chain. I have used one, and can cheerfully recommend it to all sugar-makers, and especially those that are about fitting up new sugar works. Every one knows the importance of starting right in any kind of business, and those contemplating building new sugar works, or repairing old ones will find it to their advantage to examine Cook's new method for boiling sugar. The plan has decided and important advantages over the present system.

1st. More sugar can be boiled with the same amount of wood than in the old way.

2d. It boils faster, and consequently is a saving of time.

3d. The sugar is of a much better quality than can be made in any other way.

Mr. Cook's evaporators are made of galvanized iron or copper; the copper ones are said to be the best.

The one I have is a No. 3, made of galvanized iron; is about eight feet long and four feet wide, and is fitted to a furnace that is made for the pan. There are fourteen flanges raised on the bottom of the pan which are one and a half inch deep, and about four inches shorter than the width of the pan. These flanges make fifteen channels crossways of the pan, and are left open at every alternate end for the free passage of the sap. A tub of sap is placed at the forward corner with a faucet, so as to run into the first channel, which begins to boil, with a good fire, in the third channel, and continues to boil, growing sweeter and sweeter until it reaches the opposite end and opposite corner of the pan, where it runs out in the form of good syrup into a tub or pail, and is ready for "sugaring off." I did not get my pan in season for the first run of sap, or not until after the 20th of March; but I must say that all the sap boiled in this pan made most excellent sugar; in fact, some made after the 5th of April is fully equal to any I ever made in the common way from the first run of sap.

Mr. Cook's Evaporator comes highly recommended from persons in high standing, for boiling the juice of the sugar cane. It is said that sugar of fine quality is obtained from the juice of the Sorghum, when boiled in this pan.

Our best sugar makers have found that the secret for making the best quality of sugar, is mainly in boiling the sap as soon as possible after it runs from the tree, and have practiced syruping down several times a day.

By using the Evaporator you never boil the same sap more than half an hour, as in that time it will be converted into syrup; the sap is running into one end and at the same time you have a small stream of syrup at the opposite end. GEO. CAMPBELL.

West Westminster, Vt., April 20.

SAND CRACKS IN HORSES' FEET.

As a cure for sand cracks in horses' feet, I will tell you what cured a horse I owned for a year after he recovered, and had perfect feet—although I have seen blood ooze from both fore feet when he moved. Take a wide chisel, 1½ inches is best, place it at right angles with a crack just above the hoof, and strike it a smart blow with a mallet or hammer. If the crack is a bad one, draw it together with screws put in diagonally between the shoe and top of hoof—keep the shoe on, the hoof damp, so as to make it grow, and give the horse rest for a few days, and you will see the crack grow out as the hoof forms above it. If the chisel was driven to the bottom of the crack, which is generally not over half an inch, the horse must not be driven hard or trotted fast for at least three weeks. After I sold the horse I spoke of, he was taken to New-York and put in livery. I saw him a year afterwards, and his feet were sound yet. JAMES THOMPSON.

Rose Hill, near Ballston Spa, N. Y.

[For the Country Gentleman and Cultivator.]

CLAY AS A FERTILISER.

MESSRS. EDITORS—In Co. GENT., March 29, I find an article over the signature of J. G. C. He says, page 203—"but if, as in this case, the surface is loam and the subsoil pure cold clay, it is ruinous." It 1843 or '44, one of my neighbors wanted to get clay from my land for the manufacture of brick. Willing to accommodate, but not desirous to have a large surface dug over, I requested him to dig as deep as the clay was good. He dug so deep that they used a ladder to get out of the pit, and threw the clay on a staging, and then out—*pure cold sour blue clay.* The clay was drawn a few rods, and there left, and when more convenient it was drawn about one-fourth of a mile and manufactured. There was two or three feet depth of clay left, it never having been removed from the first place drawn to. A year or two after, I plowed up this field—it still is rather low and moist, and plowed through this mound of clay, and planted the field to potatoes. Where the clay had been deposited it plowed up very mellow, and on that spot I had the best potatoes. I then sowed the lot to rye, and on the clay mound the rye was very heavy—as much again as on any other part of the lot. Ever since the lot has been in pasture, and on the clay mound the grass can be distinguished a number of rods up to this date as decidedly more luxuriant, and the cattle gnaw it more closely as if sweeter. Such are the simple facts. How can the above extract be reconciled with this statement? STEPHEN BULLOCK.

Columbia X Roads.

RAISING EVERGREENS FROM SEED.

MESSRS. EDITORS—Can any of the numerous readers of the COUNTRY GENTLEMAN, tell how to make evergreen seed grow—such as pine, cedar, arborvitæ, spruce, fir, &c.? Some say it will take them eighteen months or two years to come up. Now I want to plant some the present spring. An answer soon to the above query, would be thankfully received. D. M.

Plant the seed in fine rich mould, covering them by sifting fine earth or mould over them, to a depth of a fourth to half an inch—keep the soil constantly moist by shading, and if the seed are good and fresh, they will come up in a few days. The depth of planting must vary with the size of the seed. The young plants will need constant shading, at least the first season.

PRODUCT OF A NATIVE COW.

Among the premiums offered by the Essex (Mass.) Ag. Society in 1859, was one of ten dollars for the best milch cow of native breed, who should yield the largest amount of milk, a correct statement being given to the committee of the weight and measure of her milk; but no animal possessed those qualities which, in the opinion of the committee, entitled her to receive the first premium. To the native cow "Daisy," owned by David Merritt, Jr., of Salem, a second premium was awarded. "Daisy" was four years old in April, before being exhibited in September, and dropped her second and last calf August 3d. From May 20th, 1859, to September 29th, her feed was nothing but fair pasturage, except a little of the first crop of English hay night and morning. From Mr. Merritt's statement, as published in the Trans. of Essex Ag. Society of 1859, we learn that her milk was measured morning and evening from the 15th of August to the 27th of September, and it was also weighed. The average daily yield during this period was 29½ pounds, or 14 4-5th quarts. For the first ten days in September the average of milk was 32¼ pounds per day.

This cow came from a favorite cow, and was raised by E S. Parker, of Groveland, Mass. She dropped her first calf December 21st, 1857, at the age of two years and eight months In his account Mr. Merritt further says: "I bought her January 12, 1858, and between then and the 13th of January, 1859, she gave 2615 quarts of milk, beer measure, or 7027 lbs., at 2 lbs. 11 oz. per quart, or 9 quarts, 1 pint and 1 gill per day, wine measure, or 19¼ lbs. per day for the year." He estimates the cost of keeping her for the year to be $71.46. L.

CHEAP FENCES.

MESSRS. EDITORS—Your readers will find the following a cheap fence. It has the advantage of taking up but little room, as the rails are laid nearly straight. It is made as follows: Take your rails and place stones near where the rails lap—then drive two stakes, five feet long, one on each side, and lay up your rails until the third one—then take wire and fasten the stakes together—then lay up your rails to the desired height, and fasten wire across the top of the stakes close to the upper rails, and your fence is complete, making a large saving of land.

Crotches 3 feet long, sharpened and driven in the ground, then staked and ridered, make a quick cheap fence, suitable to keep cattle, &c., out of growing sprouts, &c.

North Chester, N. J. J. T. HOWELL.

ABOUT PLASTER.

MESSRS. EDITORS—"Lock the barn after the horse is stolen," is a trite saying—so asking counsel after the deed is done, may exhibit about the same forethought. I have ten acres of meadow—soil neither wet nor dry, but about medium—that was seeded about three years ago, to timothy and clover, but the last two hard winters (hard for meadows) have entirely killed out the clover. Now, had I better sow plaster on this meadow? or, as I have already done it, have I done right? In other words, is it advisable to use plaster on timothy—will it pay? Clover, undoubtedly, is greatly benefitted by it, but I am not so certain about other grasses. I should like also to know the best time for sowing plaster—whether quite early, or will it do to sow it the fore part of May, or later? Further, would plaster benefit barley and wheat enough to pay the expense, at $4.50 per ton?

Being of an inquiring turn of mind, allow me to ask a a question or two more and I have done. In what way does plaster benefit a crop, when applied? Is it an active fertilizer, or does it attract and retain nourishment from the atmosphere or the soil?

I have been led to these last questions, from some queer stateme ts made in regard to its application. For instance, one individual says he has used it in his garden, upon cucumbers, melons, squashes and vegetables generally, with decided advantage, but that it is just as well to put it into a tin cup, or dish of any kind, and place it near the plant as to sprinkle it upon the ground around the plant—the benefit being as great in one case as the other; this he *knows*, for he has tried the experiment. Of course, if he *knows*, that ends the matter—nothing more need be said. His reasoning upon the subject is about as clear as mud—I shall not attempt to give it.

I believe there are many opinions as to the effect of plaster, or how it operates as a fertilizer, as well as to the application of other manures. I think the best way is for every one to make and apply all the manure he can, in some form or other, and the man who keeps his eyes open, and observes as he goes along, will be likely to learn about as much from experience as from the multitude of theories advanced. J. L. R. *Jefferson Co., N. Y*

When timothy and clover are sown together, the latter being mostly (not always) a biennial plant, usually gives place to the former about the third year, unless special pains are taken to re-seed the clover. Plaster is usually very useful to clover, but very little so to timothy or grain crops, and we would not recommend it for them. We prefer, as a general rule, to sow quite early in spring, but we have known striking results in some instances, when sown after the clover was six inches high.

Intelligent chemists now favor the opinion that plaster proves beneficial by forming a constituent part of the plant. Hence early sowing facilitates its early solution by rains and its descent among the roots. There are, however, theories enough beside for our correspondent to choose such as he likes best. As specimens we condense a few, as given by a German chemical writer, as follows: According to Kollner, the lime forms useful compounds with the oxygen and carbonic acid of the air; according to Ruckert, it acts merely as food; according to Mayer, it improves the texture of the soil; according to Riel, it is an essential constituent of the plant; Hedwig called it the gastric juice of the plant; Girtaner, and others, regarded it as a stimulant; Chaptel supposed that it was useful by absorbing water. According to Laubender, it merely excites without mixing with the sap; according to Liebig, it absorbs ammonia; according to Sprengel, it supplies sulphur; others have thought that it promoted fermentation in the soil. We hope our correspondent will not understand that we propose to endorse all these views—some of them, on the contrary, have been proved erroneous by direct experiment—but in citing so many, we merely aim to show how doctors disagree.

[For the Country Gentleman and Cultivator.]

HOW TO DESTROY WHITE GRUBS.

MESSRS. EDITORS—A correspondent, some time last fall, writes you that the white grubs destroyed his nursery, and asked for a remedy. As I have not seen an answer, I will give him some of my experience with them.

In the spring of 1846, a field came into my possession which had been infested with the large white grub for 15 years, to my certain knowledge, to such an extent that they would destroy every hoed crop, and most of the grass or grain. I built a barn near the field, and stocked it with fifteen common hens. When I commenced plowing in the spring, with a little grain I trolled them into the field, and they quickly learned to follow the furrow, greedily swallowing all the grubs in sight. The field was planted to corn.

When I stopped working the land, they commenced scratching, and every time the corn was hoed and hilled the hens would level the ground again. Indeed they dug closely to the roots of the corn, often laying them bare to such an extent that I was fearful they would destroy the crop; but it was far otherwise; the crop was a good one, and not a single stalk missing, where there had not been any corn raised for fifteen years, although several times tried. The worms were entirely exterminated that year, and there have never been any seen in the field since.

Now if your correspondent is a practical man, which he no doubt is, he will know how to adopt these hints to his particular circumstances, without any advice from me, if he should think it worth a trial. J. A.

Beekmantown, N. Y.

[For the Country Gentleman and Cultivator.]

CATERPILLARS ON FRUIT TREES.

MESSRS. EDITORS—There is an old adage which says that "an ounce of preventive is worth a pound of cure." Allow me to advise your fruit growing readers to apply this wise saying to their fruit trees at once, and destroy the embryo "apple tree caterpillars" that infest them. To some this advice will not need to be given, to others it is very important, for an hour spent now in destroying this caterpillar's eggs and freshly hatched young, will save days a few weeks hence, when they have spread forth their tents to our view and great disgust. At the present date, April 20th, to 30th, the eggs of this moth—the "American Lacky Moth," are commencing to hatch, and a little practice in close observation of our trees will enable any one to easily find and destroy them. For the benefit of those that are not acquainted with their appearance I will describe them. And perhaps the words of Dr. Fitch, our accomplished State Entomologist, are more appropriate and accurate than any I can give. He says:—"The eggs from which these caterpillars come are placed near the ends of the twigs, in clusters, forming a ring, or rather a broad, thick belt, surrounding the branch entirely or in part. In these belts I have counted from 300 to 330 eggs. They are about three-fourths of an inch in length, and a tenth of an inch thick. The eggs are covered over with a thick coating of glutinous matter, which entirely hides them from view, and protects them from the weather."

This description being so clear will enable any one to discover these eggs, and now is the time for active work. Many are already hatched, and the young worms will be found usually toward the end of the same twig upon which they were hatched but being minute will not be seen without careful examination—they should all be crushed and the unhatched eggs carried to a fire and burnt, for if merely scaled off and dropped upon the ground, they will hatch and find their way to the tree. With the most careful examination, some clusters will escape, but the work of destruction will be comparatively small afterwards. And before concluding again, allow me to give farther advice, namely—cherish the presence around your homes of that bird of beautiful plumage and sweet song, the American Oriole, or hanging bird; plant a few trees of the weeping elm, from whose slender branches he can swing his nest and rear his young, and

allow no idle man or mischievous or wicked boy to frighten or destroy him or his wind-rocked home, for one of his services to man is to destroy this caterpillar just described. I do not know that he touches them at any other stage of their existence, but have frequently seen him drag its chrysalis from its cocoon and the bloody stain left behind to show the work it has done. Therefore, cherish the Oriole as a blessing and a friend. J. H. H.

Clark's Mills, Oneida Co., N. Y.

[For the Country Gentleman and Cultivator.]

Roup in Fowls—Homœopathic Treatment, &c.

Of all diseases domestic fowls are subjected to, the one we most dread is the *roup, catarrh, or swelled head*. All fowls, and particularly pheasants, are liable to it, and it generally proves fatal. In most cases we should say, kill a roupy fowl at once, unless it is valuable, as the risk of its contaminating the whole yard is great. At all events, when disease of any kind seizes an individual, it is safest to remove it from the others as soon as discovered, and put it by itself, or it may spread over the whole flock.

By some it is considered a catarrhal disease, similar to the influenza in human beings, producing a thickened state of the membrane lining the nostrils, mouth and tongue. It is supposed to originate in changes of weather and variations of temperature; and the malady becomes confirmed with running at the nostrils, swollen eyes, and other well known symptoms—they are termed roupy. The symptoms most prominent are difficult and noisy breathing, a sort of rattling in the throat. The head becomes feverish and much swollen, and the eyelids livid, with decay of sight and total blindness. There is considerable discharge at the nostrils of fœtid matter; at the commencement thin and limpid, but afterwards becoming thick, putrid and very offensive.

About ten days ago we discovered our Golden Pheasant to be ailing, moping about, feathers staring, and one eye partly closed, rending it difficult for him to pick up his food. On a close examination, we found his head feverish and much swollen, one eye closed, some fœtid matter running from his nostrils, his tongue and the roof of his mouth coated with a yellow substance,—all sure indications of the presence of roup. Being a rare and costly bird, we were very anxious to save him if possible, as we had suffered by the loss of one of the same kind of bird two years ago. Noticing in the 5th number of the present volume of the Country Gentleman, an article on Homœpathic treatment of fowls for this disease, we commenced by bathing his head, around his eyes and nostrils, with sugar-of-lead-water—his head being hot and feverish; then administered four or five drops of belladonna, diluted with an equal amount of water. Before giving the belladonna, we caused the eyes and nostrils to be washed with the arnica lotion, wiping out the offensive matter collected there; then putting him in a warm cage. This treatment was repeated for three days. After the second operation we found evident improvement, the swelling of the head gradually decreasing, his eye open, and picking up his food. After the third operation, and fourth day, the effect of the medicine was so apparent, that we restored him to his old quarters, so far recovered that he is running about eating and drinking as freely as ever.

Springside, N. Y. C. N. Bement.

[For the Country Gentleman and Cultivator.]

GOOD VARNISH.

Messrs. Editors—I send you *a recipe to make an excellent varnish*, in answer to the query of a "Subscriber," in No. 15, present vol. of "Co. Gent.," which we recommend particularly as applicable and beneficial to leather, such as boots, shoes, harness, &c., and will also answer a good purpose to hasten the finish of furniture made of wood, being perfectly dry in fifteen minutes after being applied. In the application of it, it will be necessary to prepare the article, whether of leather or wood, with a coating of oil; the former with former with fish oil, and with linseed for the latter:

Take 1 gallon of Alcohol.
1 pound of Gum Shellac.
8 ounces White Turpentine.
4 ounces Rosin.
2 ounces Oil of Lavender.

And when used for leather, 1 ounce of Lampblack

Put the ingredients all together in a clean crock, let it stand about two weeks well covered. Stir it once a day, and when fully dissolved, it will be fit for use. D. Shallenberger.

Pike Run, Pa.

[For the Country Gentleman and Cultivator.]

DRIVING BEES.

Messrs. Editors—In answer to the inquiry of "B. B. B.," in your issue of May 3d, relative to the proper time for driving bees, that if it must be done, the 21st or 22d day after the issue of the first swarm is the best time to secure the least possible waste. The reason why, is obvious, from the fact that no eggs will be deposited until another queen, as yet immature, matures, becomes impregnated and assumes maternal duties. By this time, the eggs last deposited by the old queen—excepting a few in drone cells—have hatched, become larvæ, passed through the various metamorphoses, and together with the pre-existing larvæ and sealed brood have come forth from the cells matured, leaving the combs nearly empty of brood. There is no other period, during the working season of bees, when the combs contain so little brood.

If bees are driven as soon as they commence working in the spring, there is much danger of their starving, unless liberally fed; and further, will be of but little or no profit to their keeper that season; for the reason, that in spring, they are comparatively few in numbers, and if they are obliged to build combs, requiring a large amount of honey, time and labor, a long time must necessarily elapse before the new progeny of the queen will be added to their numbers, during which their own scanty few are daily diminishing, so that the colony will be very much reduced by the time of the new recruits. Besides this, there will be much loss of valuable brood in the combs from which the colony is to be driven—to say nothing of the value of the combs themselves.

Having stated what was required by your correspondent, I would now caution him, as well as others who may be interested, against the ruinous practice of driving bees too frequently. If the combs have become mouldy or filled with diseased brood, it might be advisable to drive the bees into a clean empty hive, or what is better still, one filled with bright healthy combs. Do not by any means drive the bees if the combs are healthy and in good condition, even though they have been in use five or six years. Should any bee-keeper still persist in changing his bees as frequently as some, it would be far more economical to use Langstroth's movable frames, and *transfer* the best combs and those containing brood to the frames, which can be done at any season of the year. M. M. Baldridge. *Middleport, Niagara Co., N. Y.*

RED ANTS.

Will any of your readers give through the columns of the Country Gentleman, a remedy which has been tried and found effectual, for the plague of small red ants, which infest our sugar and cake closets in July and August, and oblige

Middletown, Conn. A Distressed Housekeeper.

We have been told that by spreading ordinary *cotton-batting* upon the shelf, and placing the bowls of sugar or plates of cake upon it, the red ants may be prevented from getting into them—their legs not being adapted for use upon the loose and fibrous cotton.

This remedy has the advantage of cheapness and facility of trial, and we should like to learn the result if any of our readers put it to the test.

[For the Country Gentleman and Cultivator.]

THE BEE-MOTH.

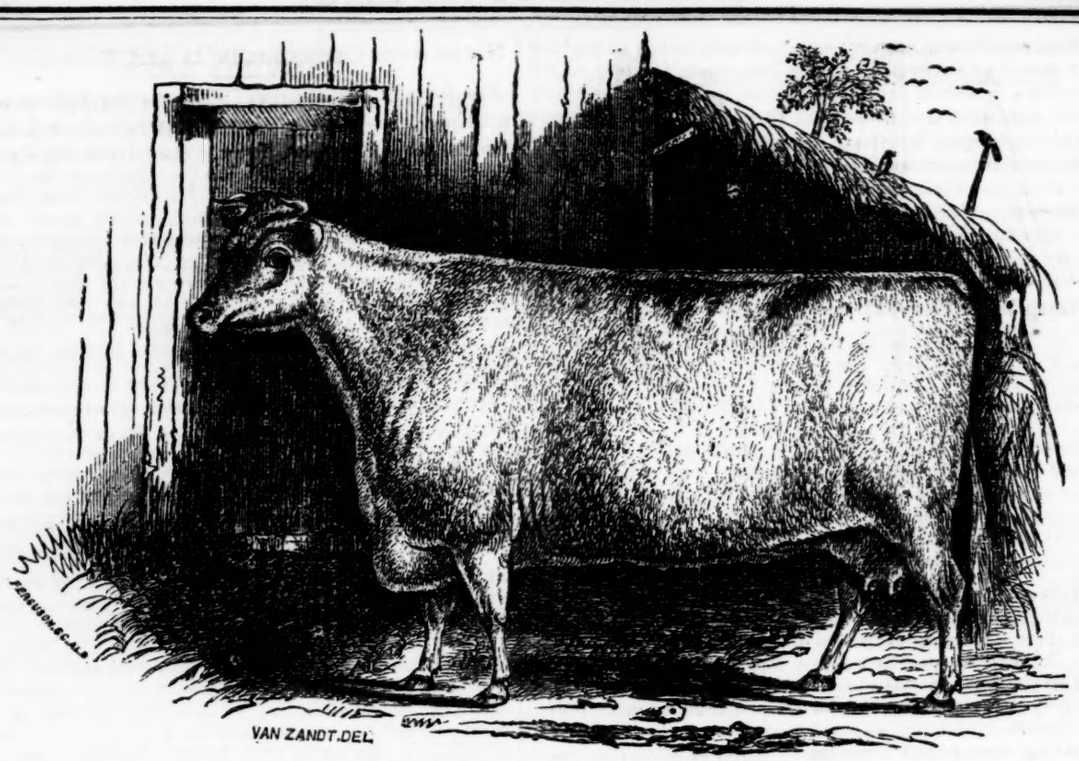
Messrs. Editors—The bee-moths are excessively annoying here, and as I know of no remedy but lifting the *gums* every morning, which is very troublesome, I would like very much to get a hive which would keep out these insects. There are a great many patent hives for sale here at the south; but they are generally so complicated, and so many have proven to be failures in respect to keeping out the moth, that I have no confidence. A have my bees hived in the hollow of a gum log, sawed off 2½ feet long. Common salt sprinkled under the bottom of these gums or hives keep the moths off in some measure. But still I find some every two or three mornings. N. A. C. *Tilton, Geo.*

[For the Country Gentleman and Cultivator.]

CLAMS AND OYSTERS.

Four eggs—half a pint sweet milk or cream—twelve clams. Bake fifteen to twenty minutes.

Oysters—three eggs, half a pint cream—half pint oysters, and a little salt—bake. V.



SHORT-HORN COW PERFECTION.

White—calved in 1852—bred by Mr. Hume of Kentucky—the property of Col. Wm. H. Slingerland, Norman's Kill, Albany Co., N. Y. Got by Rough and Ready, 929—dam Red Rose by Rhoderic Dhu, 2143. —— Young Pink, by Leonidas, 632. —— Kate, by Marshall Suwarrow, 692. —— Old Pink, by a son of imp. Tecumseh, (5049.)—— —— by imp. San Martin, (2599.) —— Mrs. Mott, [imp. by Col. Lewis Sanders of Grass Hills, Kentucky, in 1817, with "Tecumseh" and "San Martin,"] by Adam, (717.) —— Starling, by a son [by Favorite, (252,)] of Mr. Maynard's old Yellow Favorite Cow. —— Starling, by a son of Hubback, (319.) —— —— by Manfield, (404.) —— Young Strawberry, [bred by Mr. John Maynard and sold to Mr. Charles Colling in 1785,] by Dalton Duke, (188.) —— Old Favorite or Lady Maynard, [bred by Mr. Maynard,] by R. Alcock's Bull, (19.) —— —— by Jacob Smith's Bull, (608.) —— Strawberry, by Jolly's Bull, (337.)

Manuring or Top-Dressing Dairy Pastures.

It is pretty generally known, we presume, that bones have been found superior to any other manure for the purpose of improving grass lands generally, and pastures used for dairy purposes in particular. This is the result of *many* observations and experiments in *different* localities, of which, however, none are so generally known, or so conclusive as those made during the last thirty years in Yorkshire, Cheshire and Lancashire, England. It has been repeatedly stated in our agricultural publications—so often that it must have met the eye of almost every reader of these publications—that, in the neighborhood of the city of Chester there is a wide range of land which of late years has maintained 30 to 50 per cent. more stock than it did thirty years ago. Mention has also been made of one farm upon which, about ten or twelve years ago, bones were applied at the rate of 15 cwt. per acre, and upon a part of which, at the rate of 8 cwt, have been applied since. This farm now keeps, and has kept ever since the application of bones, more than double the stock it did previously.

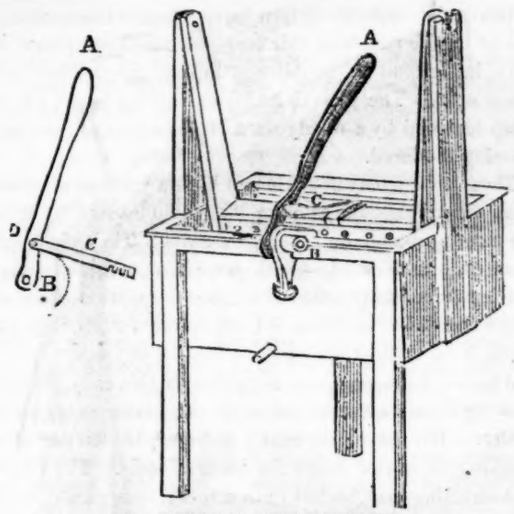
Such facts as these, and the generally acklowledged superiority of bones as a dressing for grass lands and dairy pastures, were vividly brought to memory by the reading of an inquiry and the reply thereto, which we quote below from the *North British Agriculturist*, published at Edinburgh. Taking for granted, very obviously, the superiority of bone manure, a reader of that paper inquires what *kind* or *form* of bone manure is best to apply to cow pasture as a top dressing, to which the editor replies as follows: "For *permanent* effect, apply bone-dust—sometimes sold under the term of bone-meal—made from bones or bone ash, or a mixture of both. Be certain that you obtain a genuine article, as it is frequently adulterated. For *immediate* effect we would suggest that you apply a superphosphate, or perhaps still better, a cheap phosphatic guano. These guanos usually contain a very considerable, and sometimes even a large percentage of phosphate of lime, and are sold at lower rates than either bone dust or superphosphate."

Beef Barrels for Pork Packing.

It is a popular notion that beef barrels are unfit for packing pork—that pork cannot be kept sweet in barrels formerly used for this purpose. H. Dodge, of Buffalo, N. Y., says, in an article on this subject in the Rural New-Yorker, that unless they have contained *spoiled brine*—which they are often allowed to do, through carelessness in not emptying them before hot weather—they will keep pork as well as new barrels, or those which have been used for pork only. He adds, that barrels in which brine has been left to putrefy, cannot be rendered fit for use again by any process; an assertion we take the liberty to doubt.

Last year a new barrel in which a quarter of beef had been packed, was left in the cellar after the meat was all consumed—and we believe a small quantity of veal was pickled in the brine, while it was yet sweet. This was used out, and the barrel left without emptying, until a bad smell became noticeable—it was traced to this pailful or two of brine, and was at once removed from the cellar. The barrel was washed and scalded several times, with but very little effect on the odor it had acquired; and we advised that it be buried about eighteen inches deep in loamy earth, and filled with the same, several inches above the extent of the brine, for several weeks. This was done, and the odor was removed; it was again washed, and has been used the past winter for packing beef with perfect success; and we have no doubt that pork might have been kept therein without injury from the barrel.

It is well known that fresh earth is a powerful deodorizer and disinfectant. In extreme cases it might be necessary to renew the filling several times, and a clayey loam would be better than that mostly sand, having stronger absorbent power. The best way, however, is to take care to empty all beef barrels while the brine is sweet, and as soon as the meat is used, thus saving a large amount of disagreeable labor.



WASHING MACHINE.

MESSRS. EDS.—In the Annual Register for 1857, there is a Washing Machine which you recommend, and during last year there was an inquiry made in the COUNTRY GENTLEMAN as to the best machine, and you refered him to the Register for a description. I have that, but there is no mechanic in this part of the country that can make a machine from that description. A. B.

Having recently had a number of inquiries similar to the above, we copy the figure of the washing machine alluded to, and give the measurements of the different parts, which will probably enable any mechanic of fair abilities to make one. The trough or box for holding the water should be made of clear inch and a quarter plank, and be secured very strongly at the corners, so as not only to be water-tight, but to withstand the pressure of the board. It should be about 14 inches wide inside, 23 inches long, and 11 inches deep. The legs, to which the corners in front are firmly nailed or screwed, (the end pieces of the box projecting for this purpose as far as the thickness of the legs,) should be an inch and a half thick, 3 inches wide, and two feet long to the top. The standards for supporting the swinging or perforated board, screwed to the outside of the box, are strips one inch thick, and three or four inches wide; they have a notch at the top for the pivot of the swing board to turn in—they rise two feet above the top of the box. The handle A, and the thrusting bar C, attached to it by the strong joint D, are both of cast-iron—the handle is 18 inches long, and the joint D is 3 inches from the end B. The bar C is 10 inches long. The perforated board, a small portion of which is shown in the cut, just swings freely inside the box, or within half an inch of the bottom. Now, by working the handle A backwards and fowards, the connecting bar C thrusts the swing board against the back side of the box, pressing with great force the clothes placed there. The clothes are placed only on this side of the swing board, and not on both sides. When the handle is drawn back towards the operator, there is space of about 8 inches for the clothes; when full pressure is given, this space is reduced to three or four inches, and the quantity of clothes should be just sufficient to fill it The bottom of the swing board has a sloping projection or ledge running its whole length, and wide enough to touch the back of the box, when pressed against it, to prevent the clothes from working under it. The bar C is notched so as to regulate this space—and these notches, which are large and strong, fit a very stout iron projection at the top of the swing board, screwed on firmly, and secured by clasping the top of the swing board.

The patterns for the cast-iron handle and bar, being simple, could be easily made. It seems strange that this simple, efficient, and valuable machine should not be found anywhere, in market. The one which we have now used for many years was made by a mechanic of small business, who has since given it up—the cost about six dollars. It is easily worked by a boy ten years old.

Notes from Correspondents and Exchanges.

THE ROYAL IRISH SOCIETY.—The coming Exhibition of the Royal Agricultural Improvement Society of Ireland, is to be held at Cork, July 25th. The following paragraph in the Irish Farmer's Gazette of a recent date, has accidentally escaped earlier notice:—

"We take the opportunity of reminding those of our American friends who may be desirous of procuring stock, that Cork is particularly convenient for them, Queenstown being now the point of departure and arrival of a weekly line of steamers to and from America; and we hope that our excellent contemporary, the COUNTRY GENTLEMAN, (Albany,) and our other American exchanges, will bring this fact under the notice of their numerous readers."

It gives us pleasure to comply with this request; and we may add that, judging from the columns of the Gazette, more interest than usual is taken in the show referred to.

THE AGRICULTURAL SOCIETIES OF MASSACHUSETTS.—W. LATHAM, Esq., of Bridgewater has been kind enough to transcribe for our columns the following list of the names and residences of the Secretaries of the Agricultural Societies in the Commonwealth of Massachusetts, for the year 1860—to which we add the time when each will hold its next annual exhibition, so far as we have been able to ascertain:

Massachusetts—Richard S. Fay, Boston—no Exhibition, we believe.
Essex—Allen W. Dodge, Hamilton—Exhibition Sept. 25.
Middlesex—Joseph Raynolds—Concord—Sept. 20.
Middlesex South—James W. Brown, Framingham—Sept. 18.
Middlesex North—George Stevens, Lowell—Sept. 13.
Worcester—Henry R. Keith, Grafton—Oct. 2.
Worcester West—Charles Brimblecom, Barre—Sept. 27.
Worcester North—Wm. G. Wyman, Fitchburg—Sept. 25.
Worcester South—Samuel H. Hobbs, Sturbridge—Oct. 4.
Hampshire, Franklin and Hampden—H. K. Starkweather, Northampton—Oct. 4.
Hampshire—Lucius N. Boltwood, Amherst—Oct. 11.
Hampden—J. N. Bagg, West Springfield—Sept. 20.
Hampden East—George Robinson, Palmer—Sept. 18.
Franklin—James S. Grennell, Greenfield—Sept. 27.
Berkshire—Thomas Colt, Pittsfield—Sept. 27, or Oct. 4.
Housatonic—Samuel B. Sumner, Great Barrington—Sept. 26.
Norfolk—H. O. Hildreth, Dedham—Sept. 27.
Bristol—Lemuel T. Talbot, Taunton—Oct. 2.
Plymouth—Williams Latham, Bridgewater—Oct. 4.
Barnstable—S. B. Thinney, Barnstable—Oct. 9.
Nantucket—James M. Bunker, Nantucket—Oct. 11.
Martha's Vineyard—Henry L. Whiting, West Tisbury—Oct. 16.

WESTERN N. Y. AG., HORTICULTURAL AND MECH'L ASSOCIATION.—The Directors of this new Association held their first meeting at Rochester, on the 26th ult., and organized by electing P. BARRY, President, and D. D. T. Moore, Secretary. The Secretary was instructed to procure and open books for obtaining subscriptions to the stock of the Association, and a committee was appointed to solicit subscriptions. We learn from the Rural New-Yorker that the proceedings throughout were "quite harmonious."

NEVER MISSES.—I have been a subscriber to your old "Genesee Farmer," "The Cultivator," and "The Country Gentleman," more than twenty years; of the latter *I have not missed a number*. On account of the "hard times" I have thought seriously of discontinuing it, but I have come to the conclusion that I cannot afford to cut such an old and *valued* acquaintance. A. K. *Whitewater, Wisc.*

REFUSE TAN.—A correspondent of the North British Agriculturist writes to enquire the value of refuse tan as a manure, as he can obtain it at a small cost in large quantities, to which that paper replies, "refuse tan is of little value as a manure. You should obtain it for carting away. Used as a litter it will absorb liquid manure. The soils to apply it to are tenacious soils, such as cold clays."

SPRING WHEAT.—I see that some of your correspondents think wheat is a hard crop to raise, but I disagree with them. The past season I sowed four bushels of China wheat on two acres of ground, and harvested 65 bushels from the same. The above crop was raised without manure of any kind. If any of your subscribers can beat that, I'll try again. E. B. *Butternuts.*

LARGE EAR OF CORN.—H. Keller of Wrightsville, does not come up to the ear of corn I had in Frederick, grown by David Kemp, (one of your subscribers,) in the year 1837. It contained 1812 grains. I could never get its equal, though I gave a reward of $5 for the largest ear.
Pomona, Md. W. C. H.

WHITE BEANS.

The growing of white beans as a general farm crop, will no doubt receive a renewed impetus from the success of experiments in feeding them to farm stock the past winter. It has been found that they are of high value for sheep, fed whole and raw, and when mixed with other grains and ground, make meal or provender, readily eaten by cattle, hogs and horses, and that of the most nutritious kind. Poultry can also be fed upon them, if first cooked, and we have seen them eaten raw by hens. Of their culinary uses we need scarcely speak—they have long been known and prized by the human race as a hearty and nourishing vegetable food.

Belonging to that class of plants which draw lightly upon the soil, and being planted in rows, so as to admit of the use of the horse-cultivator and clean culture, they may profitably take the place of the summer fallow before wheat and other autumn crops. And if fed out upon the farm, their culture will constantly enhance the fertility of the same. We have that faith in these statements that leads us to put them into practice, and in resuming wheat culture, shall grow beans as a fallow crop, and for feeding sheep and cows, for which we have already employed them to a considerable extent, and with very satisfactory results.

Beans do well on any dry mellow soil, if we except muck, but are best suited with the best corn soils, moderately fertile, but not directly manured. A clayey loam will grow good beans—even a clay soil, thoroughly drained, will do so. We may safely say, that on any soil sufficiently warm and deep to produce wheat, we may grow beans profitably as a fallow crop.

After the other spring crops are sown, and the corn planted, getting in the bean crop fills up the few weeks which intervene before "hoeing and haying." Turning under a clover sod or any loam land greensward with a flat furrow, and then harrowing thoroughly, so as to get a mellow soil, we would be ready to plant about the first of June. This can be done with a common seed-drill, arranged so as to drop single beans two inches apart, and two and a half feet distant in the rows. They are more conveniently hoed, as well as pulled, if planted in hills, the same distance apart in the rows, and from fourteen to eighteen inches distant in the drills, according to the strength of the land and the habit of the variety planted. For hill planting, we first mark out the drills with a marker, making three or four rows at once, two and a half feet apart, and then plant across these with a hand-planter—putting from four to six beans in the hill. It is sometimes necessary in using these planters to go over the ground with hoes, so as to make sure work of every hill—some always failing get covered with mellow earth.

On such land weeds are seldom troublesome—if any should appear, as soon as the beans got three or four rough leaves, we would on a dry day turn in a flock of sheep. They must not be too hungry when they come in, or remain after their work is done, or they may injure the beans. Then, when the plants were six inches high, the passage through the rows of a horse-hoe, set so as to throw a light furrow of soil toward the beans, would finish the culture, for they would by that time branch out so as cover the ground. It should be remembered that beans will not bear working while wet; the earth falling on the wet leaves, rusts them, and injures their growth. On foul land the horse-hoe should be used early, as soon as the weeds appear, and frequently, as fast as they grow up, and it will be no great task to exterminate them. Clean culture should be the rule with this crop—and especially so if we grow it, instead of summer fallowing preparatory to a wheat crop. The growth and yield of the beans will be much lessened by a weedy state of the soil, and their even ripening hindered.

Though they may not bring as high a price in market as some other kinds, the small or "medium beans" are found the most profitable on several accounts. They yield well, ripen early and evenly—both important considerations—and are more easily cured and fitted for market, than the larger and later varieties. Their value for feeding purposes, is no doubt fully equal to that of any other.

Another inducement to attention to this crop, to wool-growing farmers, is the value of the stalks or straw for fodder. We have frequently referred to its use when speaking of winter forage for these animals. The subject of harvesting may be left until a more seasonable period.

[For the Country Gentleman and Cultivator.]

TURNING STOCK TO GRASS EARLY.

Messrs. Editors—If I rightly apprehend the spirit of your valuable paper, it is open to the discussion of agricultural matters and the experiments and experiences of agriculturists generally, however widely they may differ in their results. Now your issue of March 1st, contained an article from the pen of Mr. Emerson of Hollis, Mass., under the above caption. Mr. Johnston, near Geneva, replies, and denounces the views expressed in that article; but I for one am inclined to believe that the article of Emerson is justly entitled to some credit for the following reasons: The Hon. Azor B. Crane of this place, bought fourteen farrow cows April 23, 1857—turned seven of them to grass that day—hired the others kept three weeks on good hay—then turned them with the first named seven to grass. The first seven sold, before July 15, for $5 per head more than the others brought two months later—the late ones selling for less per lb. for not being fit for the butcher sooner.

Next, two steers, turned to grass April 20, 1858, (by the same gentleman,) had no hay or grain after—weight about 2,000 lbs.—killed in August—had gained over 500 lbs. liveweight. They had run in a range with thirty others.

June 16, 1858, turned in the same range twenty-three steers—had been kept on hay to that time nearly—were in much the same condition as the two before named—weight 950 lbs. each, or a fraction over. Run till Nov. 1—weighed in like condition on same scales—had gained 298 lbs. per head. I can give you other experiments if called for.

Now for opinions. While driving last named lot to be weighed, we met a cattle-man of great experience in cattle-keeping, who was raised in our town, and has grown old and rich in the business, and on being asked how much they would gain by Nov. 1, replied—"Not much; the best of the season is gone." After the last weighing, I asked another gentleman, similarly situated, how much steers should gain in one grass season. He said 500 lbs. I told him 298. They should have gained more, said he. But on being told they were turned out so late, he said cattle must go to grass early to gain well. And that kind of sentiment prevails in this county among men who make money by fatting cattle.

Of sheep we keep but few—all ewes—and endeavor to get their lambs to market by July 15, at from $4 to $6 per head, and often let the ewes go to market at the same time. The custom is to turn them to grass day times as soon as it appears—generally early in April. I have often bought store ewes near Mr. Johnston's in the fall, that looked as if they had been turned to grass late the spring before, together with her lamb, for $1 each—brought them home and sold their lambs next June from $4 to $5.50 per head, the ewes being worth nearly as much—fed no grain except in March when the ewes were coming in, and

always let them to grass as soon as it appears. I can particularize if called for.

Mr. Johnston has farmed long—has been observing, and has, I doubt not, arrived at many correct conclusions pertaining to farming in his locality. He considers underdraining as the *one* thing needful. Well, it may be for him. I should underdrain, or keep my cattle confined until June, if experience should prove either or both advisable; and for those who are situated on the slope of high clay ridges, where all the water that accumulates above must pass down over the surface, underdraining is not only proper but necessary; and to turn stock to grass on such land early, would be the height of folly. But where land is sufficiently uneven in surface to give free circulation to water, with a porous subsoil—where the soil is fit for the plow in spring when the frost is gone, underdraining seems unnecessary; and where, from being used as a cattle range for years, many parts get so rich that the grass falls down and rots, if not eaten early; and where are some swaley parts, (too rocky to underdrain,) the grass of which is eagerly devoured if cattle have access to it early, if not eaten before better grasses get up, will be left, it seems to me, to turn out. I forgot to remark, cattle or sheep are not apt to fatten fast either on the grass or hay of lands where underdrains are necessary every fifteen feet. B. T. Crane. *Putnam Co., N. Y.*

[For the Country Gentleman and Cultivator.]

HOW TO BUILD BOARD FENCE.

Messrs. Editors—One year ago this present week, your paper contained the plan adopted by J. H. H., of Seneca Co., in building board fence. His fence combines economy and endurance, but we venture to accept his invitation to show a "better way," and shall give our reasons.

We use *split* posts, from the fact that the same timber will yield full one-third more in number than can be obtained by sawing. The ground is marked off for a fourteen foot board; two lines are stretched, one several feet above the other; the posts are set by them, two and a half feet deep, and well tamped level full. The butt ends down, are sufficiently lasting for an ordinary life-time, if made of good white oak, while the pins and flat stones used by your correspondent to keep them in the ground, are superfluous.

Then for the boards; we take good hemlock, full one inch thick, and just *six inches* wide and no wider, and begin to build. The upper board is placed four feet above the uniform surface of the ground, true and even throughout the whole length. Then mark off a space of *eight* inches; begin on the second post, so as to break joints with the upper course; proceed as with the first. Then again, leaving a space of *six* inches, begin on the first post again; breaking joints with the preceding course, you may finish the third board. Once more, leave a space of *four* inches, beginning on the second post and finish your fence. Then the last board is still six inches from the ground. Here is the place to *anchor* the fence. Take the oxen; they go closer to the boards than horses; take the plow and turn two good even furrows on each side of that fence. You may then turn professor of the spading science and throw the outer furrow on the top of the inner, till the dirt reaches the board, filling, heaping full, about each post. That fence will not pull out with the frost. It takes the action of *frost on water* to do that, but the water is in the ditch.

How is the economy of all this? Breaking joints strengthens the fence, while six inch boards excuse snowdrifts, escape high winds, and they *save* lumber. This plan puts just two feet of lumber in each line or foot of fence. Caps and battens are useless. The ditch protects it from animal assault and battery. It is high enough. No beast can pass it without starting at least three feet from the boards, rising four feet high and going as far on the other side to reach even ground. Fences made on this plan have stood here for five years past; they have not risen one inch, nor are they in any place, three inches from the line along the top. But they do not take so much lumber, auger work, stone picking and sweat, as that other fence. Geo. W. Gage. *Canandaigua, Apr. 18.*

[For the Country Gentleman and Cultivator.]

OATS---IMPORTED SEED.

Eds. Co. Gent.—Seeing recently in the Co. Gent., an inquiry whether the sowing of the heavier varieties of oats from England, was attended in this country with advantageous results, I will state that several years ago, another gentleman and myself imported from Liverpool a lot of the Potato oats, a very fine article, weighing 42 lbs. to the bushel—which we sowed. The resultant crop was also heavy, and a handsome sample; though I cannot state with certainty the weight, it was over 35 lbs., and I think it was 37. It continued to diminish in weight with each successive sowing for three years, till it reached my minimum standard for seed, twenty-nine pounds, when I again changed for the Black oats grown on Prince Edward's Island, whence I generally renew my seed trienially. This also is over forty pounds in weight when well cleaned, and the crop of last year from it weighed thirty-six pounds when cleaned for market, and yielded on thirteen acres, six hundred and fifty bushels, not lodging. Drill sown oats are found to stand better with us than hand sown and harrowed, and the difference is sometimes striking when side by side. And in my turn, I also have a question or two to ask.

Does any one know anything about the growth and habits of the Rape plant in this country; and whether it would be a good thing to sow amongst corn at the last working, to afford fall or winter pasture for sheep, or to turn in as a green crop in the spring? Also, can the seed be obtained here? An article in reply to these queries, would add to the value of your already inestimable columns, and be thankfully read by your subscriber.

Saml. P. Nicholson.

Yardville, Mercer Co., N. J., 4th mo. 23.

[For the Country Gentleman and Cultivator.]

USE OF FLAX SHIVES.

Eds. Co. Gent.—In answer to your correspondent in regard to flax shives as a manure, I would simply state my experience with them. On dry soils I have found very little or any benefit from their application. It takes a long time for them to decay, and they are very much in the way in cultivation of crops.

In moist and wet soils, I have seen a decided benefit from their use. On a low land meadow in my neighborhood, where stood a flax-mill, and where the shives had been profusely used, I observed a great increase in the crop of grass, and this continued for twenty-five years.

Decidedly the best way to use them, is to bed down the stock in the stables, and to spread them occasionally over the barn-yard. They absorb the liquid manure and soon decay; and then, like all vegetable matter, become valuable.

I have found the dry shives of very great benefit in covering the grounds in the garden for raising vegetables, when it is prepared for planting, and burning them. The ash is of some value, and warming the surface a little more, but the great benefit is the destruction of a vast number of insects so destructive to vegetation, and the plants get large enough before others appear, to withstand their attacks. I could not raise melons or vines of any kind, until I adopted this plan, and have for many years been successful since I adopted it. Wm. Newcomb.

Prolific Sheep.—We have a flock of Sheep consisting of 1 ram, 8 ewes, and 16 lambs. There were nine ewes, but one, after having a pair of lambs, died, and also one lamb—the other was raised by hand, making two lambs for each ewe, as one ewe had one lamb only. This we consider a good turn-out. Can any of your readers beat it? D. M. Nesbit.

EFFECTS OF CLIMATE ON FLOWERS.

Our climate is, in some respects, much inferior to that of England for the cultivation of some flowers. The changes of temperature here are more frequent, sudden, and extreme, than there; our winters are more severe, our summers hotter, and our atmosphere dryer. All these things are to our disadvantage in reference to the cultivation of many kinds of plants. For instance, the Pansey can never be grown in this country to equal, throughout the season, those grown in England, whose moist, equable climate is perfectly congenial to this beautiful flower. For a month or two in the early spring, fine panseys may be obtained here; but as soon as the summer sun has arrived at its usual fervid heat, then the flowers begin to dwindle, in spite of all that can be done in the way of favorable exposure or attentive nursing.

The Daisy is another beautiful flower which will neither stand the cold of our winters or the torrid heat of our summers. As with the Pansey, the flowers are comparatively worthless after the cool spring months have passed.

The Auricula is a flower of great beauty, but difficult of cultivation with us on account of the great extremes of temperature. The Polyanthus, belonging to the same family, (Primula or Primrose,) is much more hardy, and succeeds perfectly well in a shady location, with rich, moist soil. The Dahlia is also much affected by our hot summers, and does not succeed as well as in England.

The Anemone and Ranunculus, bulbous or tuberous rooted plants, are rarely cultivated in this country with much success. A moist atmosphere seems to be absolutely necessary to the perfection of these flowers.

This list might be extended still farther, but it is not necessary. It will be apparent that those plants which require much moisture for their proper development, will never flourish as well here as in those countries where showers are more frequent, the temperature more equable, and the summer heat less intense. But there are very many plants which delight in our sunny climate, and in which we can therefore equal the productions of the florists of any country. On the whole, perhaps, our climate is as favorable as any for the culture of flowers. G. B. H.

[For the Country Gentleman and Cultivator.]

BEST TIME TO DRIVE BEES.

Messrs. Editors—In your issue of 10th May, Mr. M. M. Baldridge, in his reply to the inquiry of B. B. B., in reference to the best time for "driving bees," says: "If it must be done, the 21st or 22d day after the issue of the first swarm is the best time to secure the least possible waste. By this time the eggs last deposited by the old queen have hatched," &c., and "there is no other period during the working season of bees, when combs contain so little brood." On this point I beg leave to differ with Mr. B., and as he writes intelligently on the subject, I doubt not, upon further reflection or examination, he will incline to my opinion. Having used the Langstroth movable comb hive for several years past, I have had every opportunity for, and have taken much pleasure in, ascertaining definitely the facts on this subject, and therefore speak with some confidence. On examining a stock on the 7th inst., from which a swarm had issued within two hours previous, I found the young queen not only "hatched," but able to fly briskly, and it seldom occurs that she is *later* than two days after the first swarm issues in emerging from her cell. In my numerous experiments I have generally found that the young queens commenced "laying" between the 5th and 10th day after they were "hatched." Assuming then, that she commences on the 10th day after, (at which period a large portion of the brood of the old queen would be hatched,) at the end of the "21st or 22d day," she will have her own brood and eggs, in a very large proportion of the cells, vacated by the hatching of the brood of the old queen, and the loss would be much greater than if the "driving" had been done *ten* days after the issue of the first swarm.

The practice of "driving" bees without transferring their combs should be strongly deprecated, unless the combs are mouldy, or the hive contains too large a proportion of "drone comb," as the bees consume about 20 pounds of honey in producing one pound of new comb, besides *the loss of time;* the fallacious notion that the size of the bee is reduced, if bred in the same combs beyond a few years, cannot be too soon removed. I know of one stock in which bees have been bred in the same combs for upwards of 20 years, and yet their size is not perceptibly diminished. R. C

Baltimore, May 10.

FARM ACCOUNTS.

Luther Tucker & Son—The system of keeping "farm accounts" is so imperfectly understood, that I propose to illustrate it on my plan—say for a ten acre farm, as follows:

Farm Account, Dr.

To 10 acres at $100, cost,	$1,000.00
Cost of tools,	20.00
do. seed,	30.00
do. manure,	10.00
do. draining tile,	20.00
30 days team work, at $2,	60.00
200 days common labor at 7 shillings,	175.00
Interest on purchase money,	70.00
Paid taxes,	10.00
Total,	$1,395.00

Farm Account, Cr.

By 10 acres increased in value to $110,	$1,100.00
400 bushels potatoes, at 3 shillings,	150.00
100 bushels corn, at 6 shillings,	75.00
200 bushels oats, at 2 shillings,	50.00
Vegetables used in family at cash price,	50.00
Value of tools on hand,	10.00
Total,	$1,435.00

The difference is $40, which is profit. For the next year begin with the value of the land at the end of the first year, $1,100, adding the tools, $10, and proceed as before. If stock is bought it is entered at cost, and credited with its value at the end of the year. "Fulton."

REMEDY FOR CRACKED HOOFS.

Messrs. Editors—I notice some of your correspondents making inquiries concerning cracked hoofs in horses. I have seen several very bad cases, where the hoofs were cracked up to the hair. They were cured in a short time, entirely sound, by the use of a shoe made as follows:

Have a heavy common shoe made with two iron bands or strips, about one inch wide, sufficiently strong, welded to the shoe, near the heel, and made to fit around the hoof in front, within an inch or two of meeting, with a hole in each strip for a bolt to pass through, with a tap on one end. After putting on the shoe, soften the hoof by greasing—pour in a little turpentine; then put in the bolt, and draw the crack moderately tight by turning the tap. Draw a little closer every day, until the crack is closed, and you will have a perfect cure in a short time. The bands must be turned up about an inch at the ends in front, for the bolt to pass through. J. W. D. *Highland Home.*

PROPER DEPTH OF PLANTING CORN.

Messrs. Editors—This subject was discussed before the Farmer's Club of the American Institute. Mr. Carpenter said that corn planted at three-quarters of an inch deep, came up in six days, and at two inches, nine days, and five inches seventeen days. He therefore advocated shallow planting. Now I think it would make a material difference as to the nature of the ground, and the succeeding weather. On dry sandy land, corn should be planted much deeper than on heavy clay land. On this kind of soil, if corn was planted two inches deep, and followed by wet and cold weather, much of it would never come up; and if it was planted three-quarters of an inch deep on dry loose soil, and followed by very dry weather, it would not come up for lack of moisture, in some weeks. As to the weather, this cannot be foreseen. I think one inch for wet heavy, and two inches for a loose dry soil, the proper depth J. W. Lequear. *Frenchtown, N. Y.*

[For the Country Gentleman and Cultivator.]

PEAS BEANS AND MANGOLDS.

MESSRS. EDITORS—Noticing a call for the experience of farmers in raising peas, beans, and mangolds, I have concluded to say a few words in relation to the cultivation of these crops. Although it may not be advisable as a general rule, to substitute the cultivation of peas or beans in the place of other and more standard crops, yet there are many circumstances in which they may be grown to good advantage. As where corn has failed to make a good stand in consequence of worms, grubs, or seed rotting in the ground, or late spring frost. There were thousands, and probably hundreds of thousands of acres of corn, that were cut down by the great June frost last year, that might have been sown to peas, or planted to beans, to good advantage. Also where, for any other reason, other spring crops cannot be put in in season to do well, peas or beans may be substituted to good advantage. It being one of the principal advantages of raising these crops, that they can be put in any time the fore part of June, with a reasonable prospect of a fair crop.

A neighbor raised an excellent crop of peas last year, that were sown about the middle of June. The soil on which they were grown, of a character varying from a sandy loam to a stiff clay—the peas doing equally well on all parts of the lot, of which there was some sixteen acres. The land was fall-powed, and put in a fine condition for the seed immediately before sowing, by the thorough use of the harrow, gang-plow, and roller. No manure was applied to the crop—the soil in what may be called a fair but not high state of cultivation. The yield estimated at over thirty-five bushels per acre. Another thing worth noticing in regard to this crop, is that it was cut before it was dead ripe, and the straw made very good fodder, especially for sheep, and was all used to good advantage.

Peas may be sown early, and fed in the fall, where it is doubtful of getting a good crop from late seeding, and undoubtedly would be profitable for farmers that keep a good many hogs. But in that case, a portion should be sown late, for seed, on account of the bug. It would also be very good economy for every farmer to sow a few bushels of peas for seed, late enough in the season to raise seed clear from bugs; and thus always have seed on hand, when he wishes to sow peas where some other crop has failed.

As to which is the best crop to raise, much depends on circumstances. On strong rich loams and clay soils, peas would do the best. On lighter and poorer land, it would be best to plant beans. Beans would also be best for a market crop. But to raise to feed, I should prefer peas, as being easier to raise and take care of, and likely to produce the most to the acre.

According to my own experience, which has extended through several years, though not on a very large scale, peas are altogether the most profitable crop to raise, generally producing more bushels to the acre, and at a much less cost for cultivation. I have made a practice for several years of sowing a small piece of peas about the first week in June; and have never failed to raise fair crops that were entirely free from bugs. And for the future never mean to be without good seed peas and beans, so that when corn, or any other crop, is likely to fail, they will be ready to sow or plant in its place.

MANGOLDS.—For some years I have been satisfied that raising roots was a paying institution. And for the last ten years have not been without a "patch" of carrots, mangolds, or turnips; the most of the time having all three. Although as a general thing I have raised the most of and given the preference to carrots—principally because I have used them to feed milch cows and horses, and because my land, being a light, sandy loam, is well adapted to the carrot. I have also raised mangolds to very good advantage, and think they are better suited to all kinds of soils, and can be raised at a less cost per bushel than any other kind of roots. But where roots have to be raised on clay soils, I think mangolds have a decided advantage over all other kinds, being a much surer crop, and yielding much more to the acre. Mangolds have several other advantages, as in consequence of a quicker growth when small, and a greater distance apart in the rows, it is not near the work to weed them that it is to weed carrots; and as they are not troubled by the fly or any other insect, there is much less difficulty in getting a good stand of plants than there is with the turnip or rutabaga.

I have found it a very good way to plant my mangold seed. I use the same planting bag, used to plant corn out of. Plant the rows about two feet apart, the hills a foot apart in the rows, two or three seeds in the hill. This saves a good deal of work in weeding, and thinning out. And I have never had any difficulty in getting a good stand of plants in this way.

Mangolds, as well as all other roots, should be well hoed as soon as the rough leaf appears. Then the weeding can all be done with a good square cornered hoe, with less than half the work that it will cost if they are neglected until the weeds get the start of the crop, and have to be pulled by hand. The reason so many farmers think that roots don't pay, is that the first hoeing is neglected until the weeds get several inches high. Then they go through them on their knees, and pull the most of the weeds by hand, which is a very slow back-breaking operation. Nor is the great amount of labor then required the only trouble. The growth of the crop is not only badly checked, but pulling a thick mat of strongly rooted weeds, that have grown close to the tender young plant, will loosen its hold of the soil materially, and result in great damage to the crop, if it is not entirely ruined.

So much depends on thorough and seasonable hoeing, that where it is well attended to, and the land rich and in good order, mangolds, as well as other roots, are very profitable. While, although everything else may be favorable, if they are badly neglected, they may result in an actual loss to the owner. F. *Orleans Co., N. Y.*

[For the Country Gentleman and Cultivator.]

LICE ON CATTLE.

I have used various remedies for destroying this "horrid plague;" but have found none that will accomplish it so neatly, expeditiously, and effectually as alcohol. If C. H. M. will procure a couple of quarts, (costing about 30 cents,) and thoroughly wet the affected parts with it, repeating the operation in about two weeks, (if necessary,) I will warrant a perfect cure for his "half a dozen head of calves."

I have tried this remedy repeatedly, and never knew it to fail. It is attended with no injury to the cattle. I prefer a rainy day for the operation, for the reason that the hair being partially wet, will not absorb so much of the alcohol—allowing it to spread over a larger surface. They should not be too wet however, else the alcohol will become too much diluted to kill the "varmints."

I would advise C. H. M. to do the job himself, or oversee it. If his "Pat" is like mine, he will be too apt to "make way" with the alcohol, and rub the calves with the empty bottle.

All who try the above remedy, either on their own heads or on their cattle, are requested to "report" through THE CULTIVATOR and COUNTRY GENTLEMAN, for the benefit of the whole world and the "rest of mankind."

Hebron, N. Y. E. L. C.

Take white oak bark and boil it—take the liquid and wash the animals around the neck and over their backs. I know it to be a sure remedy. Water lime is good, Plaster is good, but the bark is the surest. J. M. A.

C. H. M. inquires for the best mode of destroying lice upon calves. Feed them fine salt and sulphur, about one part sulphur, and two parts fine salt, when the weather is is not too severe. If very cold, do not let them be too much exposed. Sulphur and salt, once in two or three days, with an application of *oil* to the parts most troubled with the vermin, and you may be assured they will leave for a more congenial clime. E. S.

[For the Country Gentleman and Cultivator.]

ASHES AS A MANURE.

EDS. CO. GENT.—The value of ashes in an agricultural point of view, is, we fear, far from being sufficiently appreciated by farmers. Many are in the habit of selling them, at from eight to twelve cents a bushel, when they might get a much higher price in the increased product, if they applied them as a manure to their crops. We will mention some of the results from their use occurring in our experience, in which we have always found them of material benefit on all dry soils.

Some years since we applied ashes, at the rate of forty bushels per acre, to a gravelly loam soil, in grass at the time, to the very manifest improvement of the product. This ground was plowed up the next spring for corn and potatoes, as well as some joining to which our ashes were applied, and the benefit of the application was plainly seen, in about double the product of the ashed over the unashed portion. The potato vines withstood the severe drouth of that year perfectly, and gave excellent fair potatoes, and the corn was equally benefitted.

The effect of the application of ashes in quantity is felt for several years. In this as in all our other trials, the product showed plainly the extent of the plot covered with ashes for several years. The same fact may be noticed of the burning of heaps of logs and brush—the ground covered by them retains its fertility for a long time.

As a top-dressing for corn, we apply two or three tablespoonfuls to the hill just before hoeing the first time, and find it profitable. We have noticed again and again, a sufficient improvement to pay for the labor at a dollar a day, and double price for the ashes, and believe that they hasten the maturity and thus increase the certainty and amount of the crop. Two years ago we gave a dressing of thirty bushels per acre to a part of our cornfield, harrowing the ashes in just before planting; and had then the largest corn, and the next year the best barley, and now the best wheat of any portion of the lot, the whole being otherwise treated alike for each crop. We have applied them in the same way to barley with equal good result.

For composting with muck, ashes are of much value—nearly equal to lime, bushel for bushel, to hasten the decomposition of vegetable matter and fit it to benefit the soil. Also in garden culture and for orchard trees, ashes prove profitable, and we hope every farmer will give them a fair trial before he allows them to be sold off the farm. Other manures should be used, and used freely; but ashes will assist in bringing their virtues into the state most available to the crop, as well as having an ameliorating mechanical effect upon the soil. B.

[For the Cultivator and Country Gentleman.]

MORE ABOUT RINGBONE.

EDS. COUNTRY GENTLEMAN—I noticed in a late number, an inquiry for the cure of what is called a ringbone, from a correspondent who had a fine mare troubled with one for something over a year, and the answer was that there was no cure for a confirmed ringbone.

Now two years ago this winter, I had a fine colt that had a ringbone on each of its hind feet, and was so lame some of the time that I could hardly get it out and in the stable. I did not do anything for it till spring, and they got so bad that the colt had to walk upon its heels with its feet turned up, and I supposed that she was almost worthless. Finally one of my neighbors told me that he had a remedy for a bone spavin, and it was said to be a sure cure for ringbone, and wished me to try it. It was this: Take common salt and pound or grind it as fine as you can possibly get it, and mix it with spirits of turpentine enough to make it something like paste, and rub it on the ringbones (or spavin) once in two or three days, for three or four times, and if they have not been of too long standing, I think you will effect a sure cure. This colt of mine had but three applications of this medicine, and I then turned her out to pasture and she soon grew better, and in a short time was entirely free from lameness, and has been ever since. She is now coming three years old, and has as sound feet as any colt, though there are some bunches to be seen yet, but I think in two years more they will entirely disappear. P. *North Bridgewater.*

[For the Country Gentleman and Cultivator.]

UNLOADING HAY.

MESSRS. EDITORS—I noticed a call last summer for a contrivance to take a load of hay from the cart all at once, and dump it in the mow, and I have watched the agricultural papers to see the plan come out, but as none has appeared that I have seen, I will venture to suggest one for the benefit of all, if it should prove a benefit.

My plan is, to have two or more endless ropes spread on the cart rigging, and load on them, and when in the barn, bring the ropes together on the top, on a strong double hook made fast to a stout rope; this rope may run through tackles, with a horse outside, similar to the plan of unloading with a horse fork, while a man with a guy-rope over a pulley, back side of the mow, can direct it where he chooses. Then let down and unhook the ropes on one side, and pull them out with the same power that hoisted it.

Another way, to hoist without the horse, is to have a wheel, similar to what merchants use for hoisting hogsheads of molasses and other merchandize, hung in the ridge of the barn, and operated in the same way, with guy-rope as in the other plan. Where a barn is built with the floor on one side the barn, with short middle beams, the wheel can be hung partly over the mow, so that it will need less power on the guy-rope. Now, brother farmers, if you think of a better plan for unloading hay, please let us hear it; don't run away to Washington after a patent first.

Bethlehem, Conn. L. F. SCOTT.

[For the Cultivator and Country Gentleman.]

AGRICULTURAL PAPERS.

MESSRS. EDITORS—I often see from your correspondents that the CO. GENT. is a "paying institution," (I mean to those who take it.) There is no doubt of it, for I do not believe that any one can read it attentively, from week to week, without being made wiser—especially farmers, in regard to their calling. Even Slipshod would find it difficult to pursue his slovenly course after taking the GENT. He would see such a contrast between neatness and thrift, as advocated in the said paper, and his practice—that the reading of it would be like an application of hot blankets—keeping him in a sweat, I imagine, until his *system* (of farming) became cleansed from many of its impurities, and would finally result in a reformation. But the difficulty is to get this class of men to take and read an agricultural paper—the very ones that need it most.

I became almost eloquent the other day in trying to persuade an individual to take an agricultural paper, but I found my arguments were not appreciated—about all the reason assigned for a refusal was—"weak eyes" and a "want of time to read." Thinks I to myself the weak spot is just *above* the "eyes," and as to the want of time—why, that is the result of the *weakness*, and a lack of a more systematical way of doing things. I should consider myself in a "bad way" if I could not find time to read the GENT. and one or two other papers of the kind—notwithstanding I perform more than half the labor upon a fifty acre farm, and intend to have the work done in a "gentleman" like manner—all devoted to tillage and meadows. I prize your paper highly, as it is a *weekly* visitor—filled with valuable reading—just such information as every farmer needs—a month is too long an interval—a weekly often gives a hint just in the nick of time. My way is to begin at the beginning, and *read it through*, noting such things as are adapted to my circumstances and wants, that "stand to reason." By pursuing this course, I think your present readers, and many who are not, would be greatly benefitted by the COUNTRY GENTLEMAN. J. L. R.

Jefferson Co., N. Y.

Inquiries and Answers.

DESTROYING CANADA THISTLES.—Will you or some of your subscribers, inform me how to kill *Canada thistles*. The seed was sown in a yard of about fifty feet square for clover seed, and as there is no thistles here of the kind, we wish to prevent their spreading further. The yard is a perfect mat of thistles. Any information whereby we may dispose of them, will be thankfully received. C. T. SAMSON. *Jones Co, Iowa.* [Canada thistles are very easily destroyed, by observing one simple requisite, namely, to prevent their growing above ground, or in other words not to allow them *to breathe*. If they are cut off with a hoe the very moment they appear at the surface of the ground, the roots will in a few months die. But if they are allowed to rise a few inches above the surface each time before cutting off, they will not be destroyed, the temporary supply thus furnished by the young leaves keeping the roots alive. A small patch may be smothered in one season with a layer of boards, covering the joints closely with a second layer. The best and cheapest way on a large scale, is successive deep plowings, the first early in summer or about the time they appear in blossom, and the rest about once in three or four weeks, or as soon as the young plants begin to peep. The plowing must be very thorough and perfect, and not leave any stragglers, and the crop will be completely killed in one year. This mode succeeds best on heavy soils—on light or porous ones, the plowing must be more frequent and more thorough and perfect. On a small scale, when the plow cannot be used, the same result may be obtained by successive spadings; but in a door-yard, which cannot be spaded, an unremitting use of the hoe will do the work effectually.]

SEEDING TO GRASS.—I have a meadow lot that I wish to seed down. I have had corn on it two years. Last fall I commenced, and this spring finished thoroughly underdraining it with tile. I have now put in oats—would you in the fall put in rye and timothy, and clover next spring? or rye this fall, and timothy next fall, ('61,) and clover the following spring, ('62,) or leave out the rye altogether? An answer will much oblige R. *New-Jersey.* [The mode of seeding must vary with wants and circumstances. Should the ground be quite moist at the close of summer, it may be at once seeded to timothy alone, brushing it in, and a good crop will be produced next year. If clover is a principal object, the operation may be left till early spring, and the clover and timothy alone sown and brushed or rolled in. If a crop of grain is a prominent object, seed as usual with the grain, in which case the crop of grass will not be afforded until 1862. We think the practice will yet be more generally adopted of seeding down without any grain or other crop at the time, where good, thorough and clean farming prevails. The only advantage of seeding with a grain crop is the saving of one plowing, while it has several disadvantages.]

ASHES AS MANURE.—There are large quantities of leached ashes shipped from this quarter—they have not been used for manure about here—please post us up on the subject, and oblige the readers of the Cultivator in ROUSE'S POINT. *N. Y.* [Ashes, whether leached or unleached, have generally proved beneficial, if applied at the rate of a hundred bushels or so per acre; in some instances the benefit has been eminent and striking—in others more moderate, and in a few imperceptible. Experiment is needed in each locality to determine the amount of the benefit. We would by all means recommend our readers at Rouse's Point to keep and apply their ashes, and measure its results.]

EGYPTIAN CORN.—Please inform me whether you have any knowledge of this corn, or the person who advertises it. I have sometimes sent money to such advertisements, and received neither seed nor answer. If you know the article to be genuine you may send me one dollar's worth, and I will remit you the money as you direct. M. R. *Montgomery Co., Pa.* [We have no personal knowledge whatever in relation to this "Egyptian Corn," and as we keep no seeds of any kind for sale we could not in any event comply with our correspondent's request to send him "one dollar's worth."]

GRUBS AND CUT WORMS.—I am now busily engaged plowing my ground for corn, and find it thickly infested with both black and white grubs, and knowing no remedy by which I can extirpate them, it induces me to seek through the medium of the Co Gentleman a remedy for their destruction which will not injure my corn. G. W. H. *Esopus, N Y.* [We suppose the black grub here spoken of, is the dark, dull colored worm often called the cut worm, which cuts off small plants of the corn in the night, and conceals itself under the surface of the soil in the day time. They commit their depredations in all kinds of soil, poor and fertile, and are not, like the wire worm, repelled by fresh manure. It was formerly a notion that when one of them was cut in two with a hoe, each end grew, and made thus two worms—about as likely as that a pig's tail cut off will grow and make a second pig. There are three remedies, all of which may be combined. As they eat off but a single corn plant at a time, plant a double quantity of seed, according to the old rule—

"One for the blackbird, and one for the crow,
And two for the cut worm, and four for to grow."

Next, employ a few active boys to pass every morning along the rows, and whenever they see a plant beginning to wither, dig for and easily find the depredator—or offer them so much per dozen or hundred for all they can find and bring in a tin pail. A third remedy is to take a dibber, (or sharp iron tool an inch or two in diameter,) and make a smooth hole beside each hill. The worms will fall in and cannot get out.

We know of no remedy for the white grub but to employ boys as mentioned above.

BROOM CORN.—Have you a work on the culture and gathering or harvesting of broom corn? What is the present price per ton and the best market to buy it? I do not see the price quoted in any newspaper, or in the "Country Gentleman." I see an account of a large yield of broom corn on page 240 of vol. 14, in the Co. Gent., this is all I can find in relation to the above. J. N. F. *Two Rivers, Wis.* [There is no book issued on this subject, as we are aware, but our correspondent will find some notes upon it in another column, in answer to another inquirer.

MOLE PLOWS.—An Iowa correspondent wishes the opinions and experience of the farmers in the western states, in relation to the use of mole plows for draining, and we shall be pleased to hear from any of our readers on the subject.

BEANS.—Will you or some of your correspondents, inform me what variety of bean is the most profitable to raise for market—whether a tolerably strong limestone soil would be adapted to its culture—when they should be planted—and how? O. N. W. *Dover, Ky.* [There are several varieties of the white bean, differently known in various neighborhoods, that have been found profitable for field culture—but we are unable to say which is best, or to give the several names. Different sorts have proved favorites in their respective localities. Sufficient attention appears not to have been given to the improvement of varieties for farm crops. The value of bean meal for milch cows in winter, is such as to commend their cultivation, even if there should be no other market for them.]

CLOVER.—Last summer there was a little patch of strange looking clover, started up on our farm. It resembles the ordinary red clover, except that it grows taller, is earlier, and has an entire different blossom, which is of a deep purple color, and much larger than the ordinary clover blossom. Is this the "pea-vine clover," that I see advertised in your columns? The seed is uniformly a deep yellow, and somewhat larger than the common red clover seed. Perhaps we are behind the age in this section. A word from yourselves or correspondents may enlighten us. F. G. D. *Berks Co., Pa.*

"BEER CORN."—Enclosed I send you a sample of what is here called "Beer Corn," said to have been found in a spring in the Rocky Mountains. This remarkable substance, when put into sweetened water, soon acts as a ferment, and produces a kind of *beer*. Any explanation in regard to its history or the *rationale* of its operation, would be doubtless acceptable to the readers of the "Country Gentleman." J. W. *Henderson, N. C.* [We have no knowledge whatever in relation to the substance enclosed to us.]

ENGLISH YEW.—Have the English *yew trees* ever been grown in this country? Where can they be procured? [The English yew has been considerably cultivated in this country, and generally proves hardy, though sometimes a little bruised by sharp winters. It does best in the shade. It may be had of all the principal nurserymen who deal in ornamentals.]

MORGAN HORSES.—Will you, or some of your subscribers, inform me, through THE CULTIVATOR, which was the best horse, in reference to speed and action combined with usefulness, that was ever got by the original Justin Morgan horse, and whether he had any Canadian blood about him. J. H. H. *Sand Brook, N. J.* [We must leave the first question for others to answer. The old Justin Morgan horse had no Canadian blood in him.]

RICE MLAL.—Can you not induce some of your errrespondents to communicate through the columns of Co. Gent., (which should be a "vade mecum" with all farmers and

owners or lovers of farms, gardens, stock, &c.,) their experience in the feeding of rice meal? There has been considerable of it sold here during the past two years, and I should like to know from those who have tested it, the relative value of it when compared with oil meal, cotton seed meal, or corn meal. I have used several hundred weight—find cattle and pigs very fond of it, but have not had any *tests* made of it. Perhaps some southern friend will favor us with particulars. J. H. *New-York.* [We hope some of our readers may be able to answer the above.]

Mower and Reaper.—I have twenty-five acres of fresh grass, and thirty of rye at home, and upon another place on the shore some fifteen acres of wheat and rye, and any quantity of salt meadow, that I please to mow. Now what I desire to know is, what kind of a combined reaper and mower shall I get to do all this work to the best advantage? I have been pleased with the Buckeye; but who has tried it on salt meadows, and will it work with an ox team as well as horses? Please reply through The Cultivator. E. O. *5th mo.* 2, '60.

Inquiry.—Please to inform me what Nasturtium is, and how it is used. A Reader. [*Nasturtium* is the botanic name of a cruciferous plant, known by the English name of *water cress.* With a slight change or Anglicism, the name is also applied more commonly to the *Tropeolum*, sometimes called Indian cress, often cultivated in gardens as an ornamental plant, but more frequently for its young fruit, used as a substitute for capers in pickling.

Coloring Black.—I would like to inquire if the recipe for making black ink, given lately in the Cultivator, would make good coloring for cloth, and whether it would be injurious to the cloth, &c. D. B. Roye. [We are unable to answer this question.]

Stoppage of Milk.—I have a cow, which has a stoppage in one of her teats up next to the udder. Is there any remedy for it? Some say, keep milking it, and all will be right in time. I have tried it and it is useless. I have never known an instance but what that part of the udder failed eventually. *Butternuts.* H. P. N.

Spanish Chestnut.—I would like to ascertain through the medium of The Cultivator, if the European chestnut can be cultivated to advantage in our climate. N. H. P. [The Spanish chestnut, the most approved of the European sorts, being much larger than our common chestnut, does well in the middle States, but is slightly tender at the north, where also the seasons are hardly long enough for the full perfection of the fruit.]

Site for Vineyard—Grade Cattle.—I wish to avail myself of the very valuable privilege afforded to your correspondents and subscribers, of asking a little advice through the column of your paper devoted to "answers to inquiries." 1st. I wish to plant a vineyard of five or six acres, and have two sites selected, but cannot decide between them. One is in an old clean field on a hillside, facing southeast, and is a very rich black soil; the field has not been cultivated for some years, but has been in thick blue grass pasture. The other site is on the same hillside, immediately above and adjoining the first, but is only partly cleared, and has never been plowed. It is a very nice rich soil, slightly interspersed with lime stones. Which of the places would be preferable, and what preparation should the ground undergo before setting out the vines? 2d. I have a bull calf whose grand sire and grand-dame on his mother's side, were imported Ayrshire, and all his other ancestors Herd Book short horns. Can he be called *thorough-bred?* W. McGuire. *Brooke Co., Va.* [Probably either site would answer, provided the ground can be properly prepared, and kept well cultivated. We cannot, for want of information on all local points, state positively which would be best, but may give some conditional suggestions. The lower site will probably be warmest, and will therefore ripen the crop sooner; the upper one will be more free from night-frosts, which sometimes farther north, injure the vines during the intense cold of winter. The preparation of the soil should be first plowing, next subsoil plowing to deepen and mellow the subsoil; and thirdly, deep trench plowing, to work in heavy applications of manure—making the whole a deep, rich mellow bed. If the upper portion, being but partly cleared, cannot be thus prepared, it will of course be unsuitable. A cross between two distinct breeds is not a thorough-bred animal.]

Law about Birds.—There was a law passed, I understand, by our Legislature last winter, for the protection of birds. If such is the fact, will you please furnish us with its provisions? G. T. [There was such a law passed, which declares that "no person or persons shall, at any time, within this State, kill, cage or trap any nightingale, nighthawk, blue bird, yellow bird, Baltimore oriole, finch, thrush, lark, sparrow, wren, martin, swallow, or any bird of the species of woodpecker or other harmless bird; nor shall any person or persons kill, cage or trap any bobolink or robin, between the first day of February and the first day of October, in each year, under a fine of fifty cents for each bird so killed, caged or trapped."]

Red Cedar Hedges.—Why would not "red cedar" make a good hedge? Have any of your readers tried it? D. M. N. [We have seen some dense natural plantations of red cedar, that appeared nearly impenetrable, but most of the sheared hedges become open at bottom and do not succeed well. There are, however, occasional exceptions.]

Working Mares with Foal.—Should mares be worked when with foal? D. M. N. [Moderate or light work does well, but when severe it is injurious and sometimes fatal.]

Lime.—Is lime better to be applied in the fall or spring? D. M. N. [It is not important, provided it is finely powdered, so as to be evenly spread and diffused. Autumn application favors its more thorough diffusion through the soil, by the time spring crops are sown, and is thus a gain in time.]

Chestnut and Hemlock Boards.—Which will last best, chestnut or hemlock boards? D. M. N. [Chestnut is the more durable; and many times more so where the boards are subject to the action of soil and air, as near the surface of the ground.]

Spreading Lime.—Do you know of any machine that can be depended upon to spread any desirable quantity of lime to the acre. D. M. N. [The broadcast sowing machines will spread pulverized lime, but we are unable at present to say how much is the largest quantity per acre—probably not in sufficient quantity to prove advantageous.]

Alderneys.—*A. R. C.* We believe that strictly speaking, the channel island cattle are more correctly termed *Jerseys*, although usage with us predominates somewhat to the other, and even in some parts of Britain more common, designation.

F. You will find an admirable article on Draining, together with precisely the information for which you inquire on the subject of Fruits, in Volume Two of *Rural Affairs*, which we send postpaid for $1. It contains 450 engravings.

Green Crops.—Please give your opinion respecting the use of green manure on grass land. E. S. A. *Iowa.* [Turning in green crops, as a general rule, is peculiarly adapted to increase the growth of grass.]

AGRICULTURAL PAPERS AS PREMIUMS

☞ The receipt of the Schedule of Premiums offered by the Bucks Co., Pa., Ag. Society for their exhibition at Newtown, Sept. 26 and 27, affords us the opportunity of touching upon a topic, on which for various reasons we have heretofore preferred to say little. We refer to the substitution of Agricultural Journals in lieu of small money premiums, as awards at County or Town Exhibitions.

It appears reasonable and proper, that the two agencies to which is undoubtedly due whatever of agricultural advancement we are now making—our Agricultural Societies and Papers—should work together wherever it is possible to promote the cause in which they are mutually engaged. The enlightened views and the conviction of the pressing importance of rural improvement, on the part of the founders and managers of many of our most flourishing Societies, owe their existence mainly or wholly to the agency which such periodicals as ours have exerted in diffusing an acquaintance with the experience elsewhere acquired, and the means of progress elsewhere devised. And it would be difficult, indeed, to estimate how large a share of the popular support which Societies are receiving, must also be ascribed to the same source.

It is not the intention with which we write however, to challenge comparisons between the results accomplished by these two agencies, or to claim for either any support from its fellow beyond that which its intrinsic merits

shall command. It may nevertheless be remarked that it was not until the agricultural press had already acquired a wide circulation, that our Societies were anywhere placed upon a popular and effective footing. It diffused the knowledge of those improvements, in adopting and advancing which the members of a Society compete together—the introduction of better stock and implements, the extension of horticultural taste, and, more than all, the amelioration of farm-practice in those directions in which the Society is least able to exert a potent influence.

It is the truth of this and much more that might be added, which, together with other considerations, early led the managers of Agricultural Societies to the idea of awarding copies of Agricultural journals instead of small money prizes. The very fact of their periodical appearance, is calculated to be a contant reminder of the means by which they were obtained, aside from the direct incitement to effort presented by their contents.

But in all these matters of policy, it is experience which bears the strongest testimony. Nowhere has this question been tested so generally and on so large a scale as by the county societies in the State of Ohio, and in no State are the societies—so far as at a distance one is able to judge—more generally well established and full of vitality in "good works." Several of the societies in this State, have made the experiment at different times upon a larger or smaller scale, and many are making it now; and we have had direct evidence of the fact that their prosperity and success has never been greater than when they were doing the most to induce their members to read, and to place the means of reading in their hands.

The Society named at the head of this note, presents an additional case in which experience has justified the action of judicious managers in the direction alluded to. The Bucks Co. Society yields to none of its class in respectability and influence, and its board of officers, headed by the President, Wm. Stavely, Esq., have been slowly feeling their way and testing the working of this system, until several hundred copies altogether, of this and other Agricultural journals, have now found a place upon its prize list.

Another Pennsylvania Society that has fairly and fully tested the question, is that of Chester Co., the headquarters of which are at West Chester; no one can be better qualified than its indefatigable Secretary, J. L. Darlington, Esq., to judge of the working of the system after several years of thorough trial; and, in the present state of general interest in the question, perhaps he will be kind enough to communicate for the benefit of our readers, the results of his observation and experience. We know, at least, that his Society is constantly extending its sphere of active usefulness, for we have a letter before us from Mr. Darlington in relation to the proposed establishment of a Library for the consultation of its members.

We might allude to the testimony we have received from other States, particularly from the Societies and Farmers Clubs of Massachusetts, in farther support of what has been said. Our only object has been to respond as briefly as possible to recent inquiries as to the policy of our Societies upon this point as tested in the actual adoption of the system, and it is with regard solely to the policy of the Societies themselves, that we have ventured to advocate its adoption.

Fresh Strawberries, says the California Farmer, San Francisco, March 23, "have appeared in our market, and are sold at $2.50 a pound."

[For the Country Gentleman and Cultivator.]

VALUABLE BOOKS FOR FARMERS.

Farmers do not read half enough. If they would only spend their money for such agricultural papers as the Co. Gent. and Cultivator, and H. F. French's Farm Drainage, instead of spending their time reading so much flimsy trash as they are accustomed to read, they would be able to perform much more labor with the same force—would have more productive farms—would raise better crops and better stock of every kind, and would be far better citizens.

When I was in Albany I purchased at the office of the Co. Gent., French's Farm Drainage to read in the cars while on my way home; and I am sure I got more than one dollar's worth of information out of it before I got home. Farmers should make a present of such books to their sons. That book will be of incalculable benefit to the country.

I have just made a present to my wife of a new book just issued by C. M. Saxton, Barker & Co., 25 Park Row, New-York City, entitled "Our Farm of Four Acres." If I had as many wives as King Solomon I would give each of them a copy of this book, so that they might learn to make good butter, and to be the best housewife in butterdom. Farmers whose wives spend three or four hours in churning, and then have butter more like soap grease than butter, should get this book. I defy all Orange Co. to turn out neater and sweeter butter than is made by my wife; but still she was able to learn many things from its perusal.

Another book, published by the same firm, which every farmer should read, as it is replete with useful facts, is "The Yale Lectures." Farmers who read most, generally succeed the best. S. Edwards Todd.

[For the Country Gentleman and Cultivator.]

THE MANAGEMENT OF THE COLT.

Messrs. Editors—In the first place, never entrust him to the care of a person of ungovernable temper. Secondly, he should be treated with kindness from the beginning until he is ready for labor. Since Mr. Rarey laid his method of subduing the horse before the public, I have made the horse and his diseases my study. The colt should be commenced with when quite young, and handled carefully, as he is quick to resent any injury. I begin as soon as he is able to run about—get him so that he will not run away at your approach—get his head in your hands—if he wants to get away, let him—you can easily get him again. After handling the head so that he is not afraid, pass on to the side and limbs. The sooner he gets used to having his legs handled, the easier he will be to shoe when necessity requires it to be done. See that the dam gives plenty of milk. If she does not, teach the colt to drink cow's milk; there is nothing better to promote the growth. Great care should be observed in not using the dam so as to heat the milk, as a great many colts are rendered worthless by so doing. I should in no case let the colt remain with the mother after it is five months old, as it gives her time to get in good condition for winter, and it is also the best time for him to shift for himself; do not let him remain out after the nights get cold and frosty, as it will do him no good, but much harm. There is plenty of skimmed milk at this time of year; give him all he will drink; it will not hurt him. After he is weaned is the time to commence halter-breaking him; the method if desired, I will give in my next, and also the time of harnessing and driving the colt.

Northeast, N. Y. A Constant Reader.

SHEEP TROUGHS AND RACKS.

A good trough for sheep can be made out of a half chestnut log, by digging it out, and driving in four pins to raise it from the ground.

A good rack is made by taking a white oak piece, say 6 inches in diameter—then bore 1¼ inch holes slanting inwards, and driving rungs in, say 2 feet long, (which can be rove out)—then put four legs in the bottom to make it the desired height. J. T. H.

THE CULTIVATOR.

ALBANY, N. Y., JUNE, 1860.

☞ During a brief visit in Western New-York last week, we had an opportunity of seeing considerable of the growing wheat in the counties of Cayuga, Seneca, Ontario and Monroe, and all we saw, as well as the replies to all our inquiries, lead us to the conclusion that the promise of a good wheat crop the coming harvest, has rarely been more favorable the first week in May, than at this time. Should the weather prove favorable hereafter, there is little doubt the yield per acre will fully equal the unusually good crop of last year, while the breadth sown last fall was much larger than for some years past. While riding over our friend JOHNSTON's farm, near Geneva, he called our attention to a field of seventeen acres of Early May wheat, from seed which he received from a subscriber to the COUNTRY GENTLEMAN in Missouri, in 1858. Judging from present appearances, it will ripen some days earlier than any other variety, and its yield prove highly satisfactory. Mr. Johnston was much pleased with it, and thinks it will prove a valuable acquisition to the wheat-growers of Western New-York.

The prospect for a good crop of fruit, especially peaches and pears, was never better.

With Mr. Johnston we called on his neighbor Mr. ROBERT J. SWAN, who has, take it altogether, one of the best farms we have ever seen. It consists of over 300 acres—all of it the best of wheat land, with just enough slope to enable him to drain it to advantage, and all lying in full view from the residence. It is improved in the best manner, the whole being thoroughly underdrained, and the fields enclosed with post and board fences. We much regretted that our time was too limited to permit us to accept Mr. J.'s kind invitation to ride with him to the farm of Mr. H. T. E. FOSTER, a few miles farther up the lake, where we were assured we should have been as highly gratified as with those we had already visited.

At Geneva we visited White Springs Farm, the residence of Mr. JAMES O. SHELDON, where a couple of hours where occupied in the examination of his magnificent herd of Short-Horn cattle, which, notwithstanding the short period he has been engaged in breeding, is already taking rank among the best and most extensive herds of pure bred cattle in this country. We were gratified to learn that he proposes to exhibit a goodly number of them at the next State Fair, at Elmira, and among them a number of young animals which reflect great credit on his own skill as a breeder.

At Rochester we spent a day in visiting a number of the extensive Nursery establishments in and around that city, which we found in a most prosperous condition, the demand, notwithstanding the great competition throughout the country, having exceeded that of any previous year. No one branch of business has added more to the growth and prosperity of the rapidly improving city of Rochester, than this, which is carried on to an extent far greater than in any other single district of the country.

The spring thus far, at the west as well as here, has been unusually dry, and rain is very much needed at present.

RAPID GAIN.—In Mr. Johnston's yard, we saw the fat heifer and steer alluded to by Mr. JOHNSTON in his letter published in the Co. GENT. of April 19. The day he was three years old, the steer weighed 1,897½ lbs. Mr. J. weighed a pair of steers on the 12th of May, 1859—they were kept on pasture only through the summer, and then fed until the 6th of April, when they were weighed again, and showed a gain of 1,516 lbs. in ten months and twenty-four days. Can any of our readers show a greater increase in the same period?

☞ A Canadian correspondent states that the Parliamentary Committee on Agriculture are to propose "great modifications in the construction of the Board of Agriculture." The members of the Board are now elected by the County Agricultural Societies. "Under the bill to be introduced, it is proposed to divide Upper Canada into twelve districts, which will comprise about two of the electoral divisions, for each of which a member shall be elected to the Board, and it is proposed that the township societies as well as the one-half of the county members of the Board are to retire every other year. The Board likewise to have the management of the annual exhibitions."

NEW EDITIONS.—New and uniform editions on larger and still heavier paper, have just been issued by Crosby, Nichols, Lee & Co., Boston, of "Milch Cows and Dairy Farming," and "Grasses and Forage Plants"—two books which we have heretofore liberally commended—by CHARLES L. FLINT, Secretary of the Mass. Board of Agriculture. The publishers will accept our thanks for copies, which with regard to mechanical execution, are certainly all that can be desired. The new edition of the Dairy book moreover contains the latest news on the *pleuro-pneumonia*, some new cuts, a frontispiece, &c.

BONE DUST AND SWEDE TURNIPS.—We make the following extract from a letter under date of April 20, received by Mr. COULSON of this city, from T. L. HARISON, Esq., of St. Lawrence Co.:—"By the use of the bone dust, purchased of you last season, I was for the first time enabled to get my Swedes started ahead of the fly, and succeeded, notwithstanding the very unfavorable season, in raising over 3000 bushels sound ruta bagas, from four acres of land. I composted the bone dust with hen manure and muck, in the proportions of 1, 2 and 4, (one of hen manure, two of bone dust, and four of muck,) and applied this compost on the first drill furrow over the barn-yard manure, covering it with the second drill furrow, substantially as described by a writer in a late number of the COUNTRY GENTLEMAN."

☞ We regret to learn the death on the 21st March of Mons. Louis Vilmorin, senior partner of the well-known nursery and seed firm, Vilmorin, Andrieux, & Co., of Paris. Obituary notices in the foreign journals speak of him as personally amiable in disposition and munificent in his charities, while he numbered among his friends many of the first men of science in France; the horticultural world "loses in him one of its most enlightened, scientific, and energetic members," and one of the representatives of a family who have for more than a century devoted themselves to the study and advancement of this branch of rural science.

TERRACULTURE.—Russell Comstock of New-York, asked the House of Representatives to publish his "admitted discoveries of laws in vegetation." Mr. Whitely denounced it as "the most unmitigated humbug ever introduced to the decision of Congress," and the resolution was not received. So says the U. S. Ag. Society's Journal. Our readers will note that at least one symptom of intelligence and common sense marks the present session of our National Legislature.

☞ The crops last year in Ireland were not good, but we were scarcely prepared to anticipate so large a deficiency as is reported in the following estimate from the *Irish Farmer's Gazette*. "The total money value of the decrease in crops, last year, in Ireland, as compared with the previous year, amounts to £4,693,638; and if we add to this the balance against us in the article of imports in 1859, as shown in our impression of the 24th ult., amounting to £1,424,892, it follows that the agricultural purse of Ireland exhibited a deficit last year of at least no less than £6,118,530."

☞ Another paroxysm of successful steam plowing at the west is chronicled, but one which, according to a Chicago contemporary, has accomplished more than merely turning a furrow or two in a trial field. It is Water's Machine, which is now "triumphant," and, divesting the "triumph" of superfluous exclamation points and descriptive touches, the facts of the case seem to be these: Mr.

Waters is a Detroit man, who exhibited at the last U. S. Fair at Chicago, where unfortunately his machinery broke down; he has been modifying and improving during the winter; this spring he goes to work in earnest. During the last week in April he was engaged in Grundy county, and the writer in the Prairie Farmer had seen about seventy acres of the steam plowing, and says that Waters is engaged "in a large job of prairie breaking, for which he is paid by the acre." A gang of six plows was used, "cutting a furrow nine feet wide." During the day previous, twelve acres had been the extent of surface gone over.

The plows had been put to some very severe tests in a field full of small oak and hickory stumps or "grubs." These were cut off without injury to the plows, and apparently without effect upon the engine. We measured one of these hickory roots which had been cut through; its diameter was 4¼ inches.

As the machine is now arranged, it requires one and a half cords of wood, a hand and team to supply fuel and water, (the water in this case being a half mile away,) a fireman, two men to manage the plows, besides Mr. Waters—to which add oil, &c., and Mr. W. says the cost to him is less than $9 per day.

THE WINTER IN SCOTLAND.—Extract of a private letter to one of the Editors of the COUNTRY GENTLEMAN, from a gentleman in Scotland, dated Portobello, April 26, 1860:

We have had one of the longest winters this year that ever has been experienced in Scotland. Since the end of October we have had storms of rain and snow almost every week. The snow never lays long on the lower grounds, and here we have never had more than three to four inches at a time on the surface. On the hills, however, it has been very different, for often when it was rain on the low country, it was snow on them. Many of the higher hills throughout the country you passed in autumn, are still thickly covered with snow. Unlike the wooded mountains of New-England, the Highlands are destitute of of trees, and the winds sweep over them in all their fury, and raise the snow, and accumulate it in great masses in the sheltered hollows. These masses will not disappear this year until the summer is ended. In many parts the sheep have suffered greatly, as there is usually no provision made for them, but what they gather on the mountains among the heather and benty grasses. Some farmers in the depths of the Highlands have lost thousands. The sheep on my farm have suffered comparatively little, as it is on the borders of the low country, and the snow soon disappears from the highest grounds. As you are aware, the turnip crop was a very poor one last year, and the arable land farmer was never worse off for keep for his animals, which have been fed at an enormous expense. Those who have been able to keep on, are getting very high prices. I believe fat sheep were never higher than they were yesterday in the Edinboro' market. As high as one shilling a pound was given for fat sheep yesterday. Wheat is still relatively lower than any other article of food. I would not wonder, however, although it took a start before long, as the spring being so very backward must begin soon to affect prices. Good hay is now as high as £7 a ton, and it is scarcely to be had. There was a good crop of it in Holland last year, and to show you how needy we have been, about 10,000 tons of meadow hay have been imported into Leith from that country. The selling price at Leith is £5.10.

LIQUID MANURE.—A correspondent of the COUNTRY GENTLEMAN, writes to this paper as follows:

"A few years ago I was induced to build a sink and reservoir in the corner of my garden, to receive all the slops, suds, &c., of the house, which had been previously thrown away, and well nigh wasted. Into this reservoir I threw occasionally a few shovelfuls of hen droppings, and during the season of growth employed the liquid as it collected, in watering my garden, by means of a can and a large syringe. An application of this kind was made almost every evening, and the luxuriant growth of the plants of all kinds was truly astonishing. The remarkable results obtained by this mode of irrigating and manuring my garden, induced me to build another reservoir, get a small engine like that used by firemen, and extend the practice to my lawn, orchard and calf pasture. The increase in my crops of grass, &c., &c., has abundantly remunerated me, and I do think that if some one should invent an easy method of carrying liquid manure all over our farms, he would be one of the greatest benefactors of his age and country."

☞ A New-England newspaper publishes incidentally, a suggestion to which we wish the attention of the Agricultural public might be promptly and earnestly called, in every part of the country. It is this: the DECENNIAL CENSUS of the United States is soon to be taken; the labor is entered upon in June, and every Farmer will then be called to communicate various facts in relation to his pursuit, upon the accuracy of which—so far as exactness is attainable—their whole interest and value depend. June is with him a season when the call of the Census-taker may surprise him in the midst of pressing occupations; and if he endeavors to supply on a moment's notice the returns required, how much of what he is asked will remain unanswered—how much of what he answers will be mere guess-work, or at best no more than a tolerable estimate.

We have just obtained from Washington a transcript of the headings which are required to be filled out, together with the accompanying instructions. The produce of small lots owned or worked by those engaged mainly in other pursuits, it is not designed to include in this schedule. We condense the following particulars:

1. Name of owner, agent or manager of the farm or plantation.
2. Number of acres of improved land, pasture, meadow and arable, reclaimed from a state of nature and used for any purpose of production.
3. Acres of unimproved land—all that belongs to the farm and does not come under the last head, excluding marshes and ponds where larger than 10 acres.
4. The cash value of the whole farm, improved and unimproved.
5. Value of Farming Implements and Machinery, including wagons and tools.
6. Live Stock—total number of animals upon the farm, June 1, 1860.
7. Number of Horses, Asses and Mules.
8. Number of Milch Cows.
9. Number of Working Oxen.
10. All cattle one year old and over, not included in 7, 8 and 9.
11. Sheep—number one year old and over, June 1.
12. Swine, on June 1.
13. Aggregate Value of all live stock, whether included in above list or not.

Products within the year preceding June 1, whether sold or consumed, or still on hand:—Bushels of

14. Wheat—15. Rye—16. Indian Corn—17. Oats.
18. Number of pounds of Rice. 19. Ditto of Tobacco.
20. Number of bales of 400 lbs. of Ginned Cotton.
21. Number of pounds of Wool.
22. Peas and Beans—23. Irish Potatoes—24. Sweet do.—25. Barley—26. Buckwheat—all in bushels.
27. Value of Orchard Products in dollars, and 28. Gallons of wine produced.
29. Value of Products of Market Gardens, including Nurseries.
30. Butter, and 31. Cheese in pounds.
32. Hay in tons—33, Clover Seed, and 34, Grass Seed—bushels of both cleaned for use or for market.
33. Hops in pounds—34, Dew-Rotted, and 35, Water-Rotted Hemp—36. Hemp otherwise prepared, all in tons.
37. Flax in lbs.—38. Flax Seed in bushels—39. Silk Cocoons in lbs.
40. Maple-sugar in pounds—41. Cane-sugar in hhds. of 1,000 lbs.
42. Molasses in gallons—specified whether maple, sorghum or cane.
43. Beeswax, and 44, Honey, both in pounds.
45. Value of Home Manufactures, whether for use or sale—less the value of the raw material, where the latter was purchased instead of being the produce of the farm.
46. Value of all animals slaughtered during the year preceding June 1.

In some cases these returns must be estimates, but the precise numbers, quantities or values should be stated wherever possible; the deputy who collects them "must use his discretion in assisting a farmer to estimate fairly and accurately the amount of his crops when he keeps no exact account, and in all instances it is desired to make the nearest approximate returns which the case will admit of."

We need only repeat the expression of our hope, that our readers at least will be fully "prepared for the census-man" when he shall come; to put off the matter until the time of his visit, will only subject him to delay on the one hand, and perhaps call the farmer, on the other, from some pressing task. It will be strange indeed in that case, if neither of the two parties is too impatient to wait the hunting up of exact figures, or the careful estimate of those which cannot otherwise be ascertained.

NEW-YORK STATE AG. COLLEGE.—An adjourned meeting of the Trustees of the Agricultural College was held at the College Farm House in Ovid, on the 3d inst. The Trustees present were Ex-Gov. King, Hon. William Kelly, Hon. B. P. Johnson, Dr. A. Thompson, Hon. B. N. Huntington, Hon. J. B. Williams, Edward G. Faile, Major M. R. Patrick, James O. Sheldon, and Arad Joy. The principal object of the meeting was the reorganization of the

various committees—some of them on the Building Committee being now useless,—and to provide means for the successful completion of what has already been so well begun.

The committees were appointed as follows:

Executive Committee—Major M. R. Patrick, James O. Sheldon and B. N. Huntington.

Finance Committee—William Kelly, Edward G. Faile and B. N. Huntington.

Josiah B. Williams and Arad Joy were appointed a Committee to examine and calculate measurements and cost of College edifice according to contract.

The meeting afforded ample encouragement that the State Agricultural College of New-York will soon be a reality—a growing institution for the development of the agricultural resources of this State.

☞ The New Castle County, Delaware, Agricultural Society, owing to the efforts of some active and public spirited members, has been in the past, we believe, a well supported and flourishing fraternity; and, from a Circular—for a copy of which we are indebted to our correspondent Dr. NORRIS—we learn that it is now proposed to place it upon a still wider and more permanent basis. A subscription in shares of $10, is started for the purpose of purchasing grounds—a farm of 150 acres being obtainable within a mile of the city of Wilmington, at a reasonable price. It is designed to erect suitable buildings, &c.; to lease the land when not in use for exhibition purposes; perhaps to devote it partially to experimental culture; while, moreover another advantage from the possession of so large an area, besides the control of sufficient ground for testing the relative merits of improved machinery, &c., arises from constantly having a responsible man in charge, to receive and care for stock and machinery, at moderate charges, where it suited exhibitors to forward them before the opening of the exhibitions. We wish our friends all success in this excellent undertaking.

NEBRASKA AGRICULTURAL SOCIETY.—At the second annual meeting of the Territorial Board of Agriculture, the following officers were elected:

President—Hon. R. W. FURNAS.
Secretary—A. D. Jones.
Treasurer—E. H. Chaplain.
Board of Managers—A. D. Jones, E. H. Chaplain, J. T. Griffin, A. F. Munger, and Dr. T. Boykin.

The next Fair is to be held at the city of Omaha, September 19th, 20th and 21st.

☞ The Annual Election of Managers of the Chester Co. (Pa.) Agricultural Society, has resulted as follows:—

President—ISAAC W. VANLEER.
Vice Presidents—M. B. Hickman, Joseph Dowdall, Dr. J. K. Eshleman, Col. Sam'l Ringwalt.
Corresponding Secretary and Treasurer—J. Lacy Darlington.
Recording Secretary—Wm. D. Sugar and J. Bayard Jefferis.
Executive Committee—Lewis Sharpless, Thos. S. Woodward, Chas. W. Roberts, Thos. W. Cheyney, Wm. Chalfant, Wellington Hickman, Lewis P. Hoopes, John Hannum, Nathan Garret, Wm. Gibbons.

CHENANGO CO. AG. SOCIETY.—Mr. JOHN SHATTUCK, Oxford, has our thanks for the Transactions of this Society for 1859—a handsome pamphlet of 52 pages, including the Address of Hon. D. S. Dickinson at its last Fair, list of prizes awarded, &c. We shall copy from it, the statement of Mr. Shattuck on which he received the first prize of $25 for the best dairy farm.

☞ We are indebted to HENRY KEELER, Esq., President of the Westchester Co. Ag. and Hort. Society; for the Prize List for its next Fair, which is to be held at Mount Kisco, Sept. 25, 26 and 27. Addresses are to be delivered on the 26th, by Robert Cochran, and on the 27th, by Horace Greeley.

☞ The Virginia State Agricultural and the Virginia Central Agricultural Societies have combined, and will hold their Fair for the present year upon the grounds of the Central Society, commencing on Monday, the 22d of October, and continuing six days.

☞ The Wisconsin State Fair is to be held this year and next at Madison, the citizens of that place having raised by subscription the amount required by the Executive Board to induce them to locate it there for the next two years.

☞ The Baltimore Rural Register contains the result of a sale of Live Stock belonging to J. H. MCHENRY, Esq., which took place Ap. 16. Seven head of Devon cattle, and twenty-one of Alderneys were offered. One of the former, a cow 8 years old, was sold for $102.50, to P. T. Woodward, Esq., Saluda, Va., and a Devon bull, 18 mos. old, was sold to A. P. Rowe of Fredericksburg, for $50. Of the Alderneys, ten cows were sold at an average of $83.75 per head—the highest going for $140; one heifer was sold for $130, and another for $95, and a young bull went for $53.

Several lots of Suffolk swine were disposed of. Fifteen horses were offered, four of which did not find purchasers, but the results of the sale as a whole, are said to have been satisfactory to Mr. McH.

☞ It is stated in the "Spirit of the Times" that Hon. JOHN G. MEEMS of Lynchburg, Va., has purchased of S. LELAND, Esq., of Westchester Co., a Short-Horn bull called "Farnley," bred by the latter gentleman, at the price of $2,500. "The estates of Mr. Meems, including those of his son, Gen. Gilbert S. Meems, are the finest on the banks of the Shenandoah river, in the valley of Virginia, and jointly include over 5,000 broad acres in the highest cultivation. Upon this lordly expanse graze over seven hundred head of cattle and horses, everything appertaining to this princely establishment being upon the most comprehensive scale."

SALE OF AYRESHIRE CATTLE.—A sale of Ayreshire cattle, says the Boston Cultivator, belonging to the Massachusetts Society for Promoting Agriculture, took place on the 9th of May. The cows and heifers brought an average of $98.50—the four-year-old bull $115, and the two-year-old $85—the bull calf $52.50, and the heifer calf $40. These prices, although very low, are perhaps all that could have been expected, considering that the animals are not allowed to leave the State, and the depression in cattle-enterprise from the excitement in regard to pleuro-pneumonia.

☞ By an Advertisement in another column it will be seen that a sale of Valuable Stock, probably the first in an annual series, is announced at Waldberg, the residence of Hon. A. B. CONGER, Ex-president of the State Ag. Society. Mr. C.'s herds are widely known for extent and the care with which they have been formed, and this will be one of the most important sales of the season.

☞ We are informed that Gen. J. S. GOE, of Pennsylvania, has just sold to Messrs. E. G. Garnett and T. C. Graves, of Petra, Saline Co., Mo., 5 cows, 5 heifers, and a bull calf, all Short-Horns—also 1 pair of Essex swine, 52 Merino ewes, and 3 Merino bucks, and, in addition to the above, 4 mares, two of which were served, and one got by "Bush Messenger."

☞ Mr. Jonas Webb's ram letting is fixed for Thursday, July 5th.

FINE ASPARAGUS.—*Office of Glen Cove Farmers' Club, May* 17.—MESSRS. EDITORS—We hand you by express to-day, a bunch of asparagus raised by PETER COOK, one of the members of our club, and sent by the club to you. The season being dry and cool, we shall not cut anything like the usual amount this year. We sent from our landing on one day this week, per steamer Long Island, nineteen hundred and eighty-five bunches of asparagus—the amount would probably have been at least 2,500 the same time, with a favorable season. R. M. BOWNE, *Secretary.*

[We are much obliged for this specimen of what Long Island can do in the way of asparagus raising. It is a bunch of 23 shoots, and weighs *three and a half pounds!* Our correspondent adds that 12 or 15 farmers of his neighborhood have been recently devoting considerable attention to the crop, and we shall be under farther obligations if he will communicate for our columns the further statements and details to which he alludes. EDS. CO. GENT.]

PEAR CULTURE.—At a recent meeting of the Skaneateles Farmer's Club, it was stated that the Hon. GEORGE GEDDES, of Onondaga, was engaged in planting a pear orchard of about four thousand trees.

[For the Country Gentleman and Cultivator.]

THE CATTLE DISEASE.

The pleuro-pneumonia now prevalent in Massachusetts has spread much beyond what was anticipated a week or two since. The passion for trading, dickering, buying and selling, seems to have been greatly increased among those whose cattle were diseased, and thus have infected animals been diffused into various parts of the commonwealth; also by teaming with infected oxen. Where this calamity is to end, it is not now easy to predict. There should be the greatest vigilance exercised to prevent its crossing the Connecticut river.

Every town should take active measures to prevent any animals from infected regions being brought into their limits—and not to allow teams from such regions to pass through them. This has already been done in some towns. Meetings are called in various towns to consider the subject. The people are really waking up to their danger. This should have been done months ago. Instead of that, the disease was suffered to rage on Mr. Chenery's farm under the treatment of one or more veterinary surgeons, and Mr. C. was not informed that it is a contagious disease until he had suffered from it about three months. Of such astounding stupidity, be it spoken reverently, Good Lord, deliver other Commonwealths.

Had the veterinarian, as in the late case in Melbourne, Australia, where a farmer imported the disease from England, as was done in this country from Holland, pronounced it pleuro-pneumonia, and called a meeting as was done there, and devised measures for the immediate extermination of the infected herd, he would have honored the profession and saved the Commonwealth $100,000. But the history is too well known to require further consideration now. The question for to-day is not what might have been done, but can be done for the immediate extermination of this cattle scourge.

The Secretary of the Board of Agriculture has been ordered to inform all the Governors of the States and Territories of the Union, Boards of Agriculture, and Presidents of State Societies of the nature and character of the disease, that they may take such measures as they may deem necessary to protect themselves from this impending calamity now threatening the great cattle interest of this nation. It is hoped they will act wisely but firmly in the matter.

The Commissioners have invited the Connecticut Legislature now in session in New Haven, to lay the subject before them. While there Mr. Amasa Walker met the Rev. Mr. Lindsey, a Missionary of the American Board of Commissioners for Foreign Missions, who for seven years resided at Port Natal on the eastern coast of Africa. From a conversation with this gentleman, whose position and opportunities for observation entitle him to public confidence, Mr. Walker was fully convinced that the commissioners had taken the only course open to a complete extinction of the disease. Mr. Lindsey states that five years before he left Africa, which was several years ago, a bull, affected with pleuro-pneumonia, was imported into Port Natal from Holland. In sixty days after arrival it died. The disease was communicated to other cattle, and spread rapidly in all directions, jumping 300 miles at one time, in consequence of one of the tribe in the infected district driving a herd of cattle that distance. The disease extended along the entire coast, a distance of 1300 miles, sweeping all the cattle before it.

The cattle belonging to the tribe in which Mr. Lindsey dwelt, were, however, exempt from the infection, not a single case occurring, and for this reason: The chief of the tribe, impressed with the belief that the only remedy was in isolating his people and their herds, and cutting off all communication by means of cattle with the surrounding tribes, forbade the introduction of all cattle into his domains. He cleared a belt of land about 300 rods wide, entirely around his kingdom, and this, by agreement with the surrounding chiefs, was regarded as neutral ground. No cattle were allowed to cross it, but, in the process of transportation, goods were drawn to the line of demarkation on one side by cattle, then carried across the belt by the natives, and taken up again by oxen in the adjoining territory. The result of this judicious action was that not an animal died of the disease in that tribe. While beyond the belt, cattle could be seen dying upon the hills, and within it there was perfect security. Mr. Lindsey strongly asserts that the disease cannot be compromised; that it is a *contagious consumption*, which is incapable of modification. It is the same in Africa as it is in Holland, and it will be the same in the United States, unless it is eradicated. It has obtained a foothold in this country, and unless some speedy and effective plan is adopted, it will overrun the States.

A petition for calling an extra session of the Legislature has been prepared by the commissioners after due deliberation, in order, if possible, to derive means and make an appropriation ample to complete the work of extermination.

There are well authenticated cases of the disease having been communicated by the clothing of those visiting the infected cattle, to healthful cattle, and yet there are croakers in every slough of ignorance, proclaiming vocally, and through such papers as they can, that pleuro-pneumonia is neither contagious nor infectious—whereas it is undoubtedly both—judging from the testimony of experience and observation. GEORGE. *Eastern Massachusetts, May* 19.

[For the Country Gentleman and Cultivator.]

TURNING STOCK TO GRASS EARLY.

MESSRS. EDITORS—It may do for Mr. VAN LEER, (see Co. Gent., p. 268,) to turn out his stock as soon as his grass starts when he sends them to market on or before the 15th of July. Were he to keep them over until November, he would talk differently no doubt; but I do not understand what kind of grass he has, that his cattle will only eat it when first turned out in spring. Cattle and sheep eat the grass on my lowest land at any season of the year, as well as that on the upland. If his lowland is wet so that they wont eat it only when they first get to grass, I guess it will do them no more good than those raw potatoes will do the sailors, that he says they will eat when confined to salt meat for a long time. Surely the gentleman dont mean to infer that they will fat the men, neither will grass growing out of water fat cattle.

Mr. V. L. says he has fatted cattle for over 30 years. That is not enough to make him perfect, if he always follows the same course. I have fed both sheep and cattle over 50 years, and I am still learning. I think I have made some valuable discoveries in the last seven years; but more than 50 years ago I knew that grass growing in low land, with water at the roots, was poison for sheep, and while it might keep cattle alive for a month in spring, it would not improve their condition any more than *raw potatoes* would sailors, as I presume the stomachs of sailors are like other men's. JOHN JOHNSTON.

IRRIGATION.—I would advise all your readers to "wash" their low lands where there is a chance. A neighbor of mine has turned a brook on a rocky defile, and now he cuts several tons of hay from on top of where those large rocks lay. In the spring of the year many loads of valuable manure and fertilizing matter are washed off of our land because we don't dam and throw the water where we should. The amount of fertilizing matter annually washed away by small brooks is immense. We can save much of this matter by a system of dams and ditches so as gradually to let the water off, leaving the debris on the surface and in the pond holes. J. T. H.

VALUE OF OAT STRAW.—Mr. Burt, of Norway, N. Y., states in the Rural New-Yorker, that he was obliged last summer to cut his oats very green, on account of the grasshoppers. From eight acres, yielding 300 bushels, he kept eighteen head of cattle two months on the straw alone, without grain, and kept them well.

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